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Chilled Car Wheels

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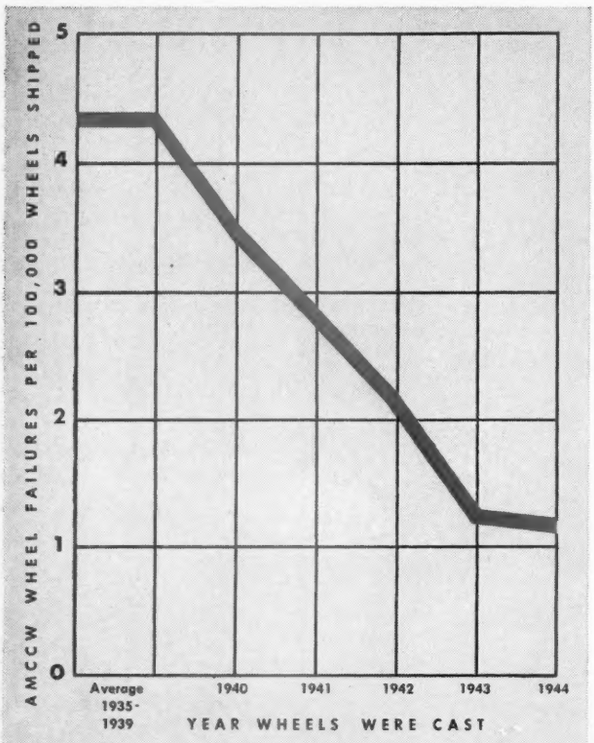

Relationship of AMCCW Chilled Car Wheels shipped in U. S. during individual years, to Failures causing ICC Derailments within 300,000 gross ton miles of wheel service after date cast.

The descending curve in this recent chart marks a year-by-year reduction in AMCCW wheel failures. It compares relative failures during equal service periods.

It shows that the *trend to greater safety continues.* Chilled Car Wheels cast in 1944 surpass their own previous record. They had fewer failures —during their first 300,000 gross ton miles— than those cast in any other year.

Behind this improvement in safety are (a) higher standards of wheel making carried out by members working closely with AMCCW Resident Inspectors and General Inspectors, and (b) the results of uninterrupted research and tests made increasingly strict by AMCCW metallurgists in the Association's laboratories.

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RAILWAY AGE

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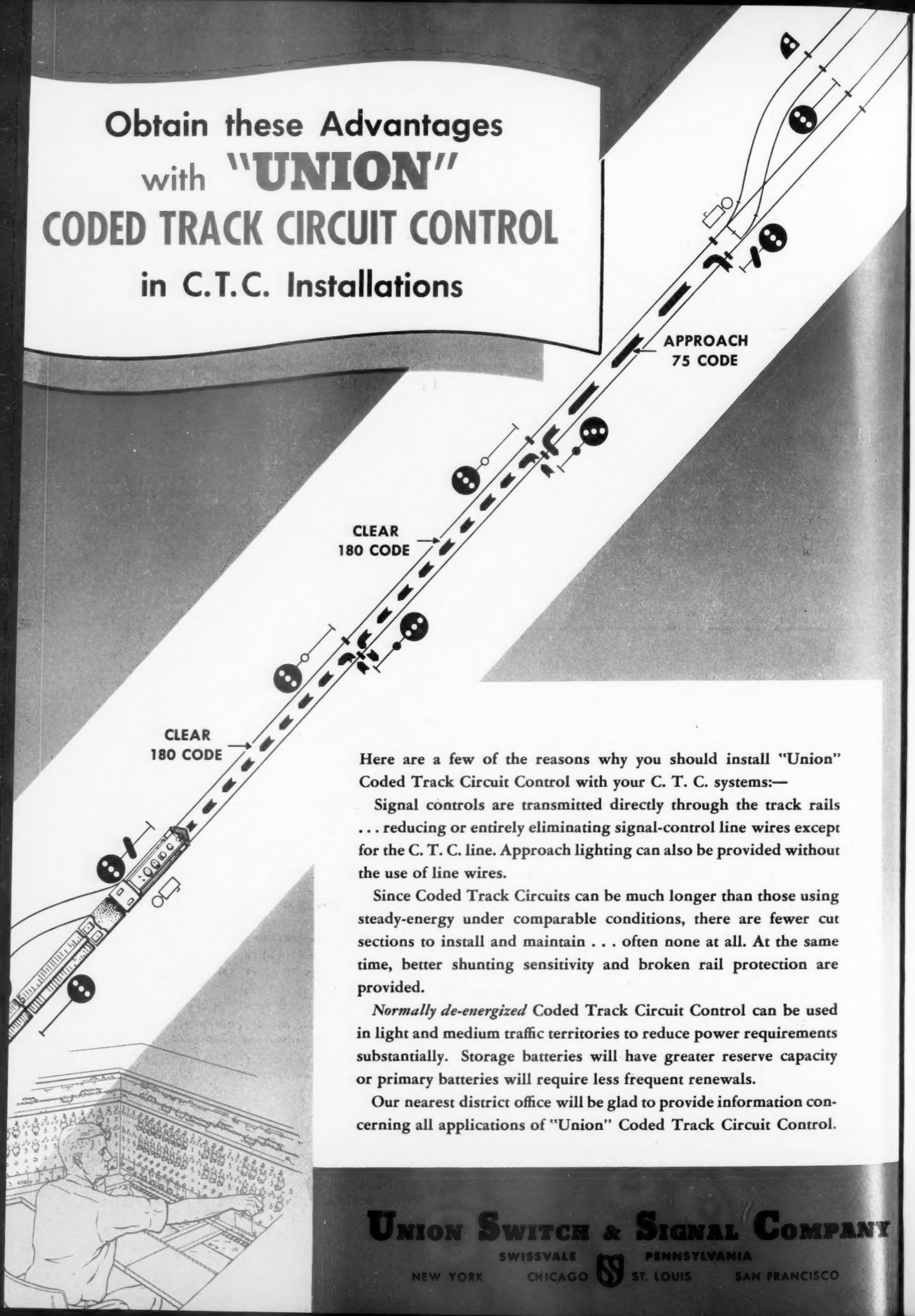

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WEEK AT A GLANCE

POINTING THE WAY: "Any industry [the railroads, for example] finding itself in a situation of stabilized or decreasing revenue but with constantly rising costs and prices must turn to increased economic and technical research to maintain its competitive position." Such, in brief, was the central idea of a thought-provoking address to the Pacific Coast Transportation Advisory Board on March 17 by Weldon B. Gibson, of the Stanford Research Institute. Mr. Gibson's analysis of major railroad problems is so sound, and his suggestions for ameliorating them by more and better research along both technical and economic lines are so potentially valuable, that we are reprinting, beginning at page 46, substantial portions of his talk.

PART OF THE ANSWER: One of the greatest possibilities for profitable railroad research, in Mr. Gibson's opinion, lies in "design of additional special purpose cars." Just such a special car—the Trans-Flo compartmented hopper—has been developed by the General American Transportation Corporation, in collaboration with the Fuller Company, for transportation of flour and other granular products. The new car is described on page 51.

MOVING RIGHT AHEAD: This week, as reported in our News pages, the Transportation Association of America took another big step in its "Economic-Statutory" project by organizing its Allegheny Advisory Forum. Meantime, the project as a whole was the subject of favorable comment in the address to the Pacific Coast Transportation Advisory Board by Weldon B. Gibson and in one to the Pacific Northwest Advisory Board by Earl B. Smith, traffic director of General Mills. Mr. Smith's speech, abstracted in the News section, was a powerful plea to railroad men and shippers to "labor together" to preserve the transportation industry (and particularly the railroads) "in healthy and efficient condition as a private enterprise."

MECHANIZED BALLAST REMOVAL: An illustrated article beginning on page 54 tells how the Chicago, Burlington & Quincy made good use of special machinery to remove and replace ballast on a busy stretch of multiple-track main line inside Chicago yard limits.

BUSY WEEK: Railroad news developments came thick and fast this week—our News pages cover a variety of topics. Among them are the railroads' application for increased interim mail pay; a Hoover Commission proposal to liquidate the Federal Barge Lines; formation of a "railroad task force" for the National Security Resources Board; a report of net income for 1949's first two months, which effectively reveals the impact of severe winter weather on Western lines; opening hearings in the proposed Western agreement under the Bulwinkle-Reed Act; discussion by Ralph Budd and Fred G. Gurley of the proposal reported last week for government purchase of freight cars; a court decision, favorable to the railroad, in the litigation which we reviewed two weeks ago between the Pittsburgh & Lake Erie and some of its trainmen about pay for coupling air hoses, and a round-up of transportation legislation introduced in Congress.

THE SAGA OF JOHN BARBUTO: In our News pages there's a little story about one John Barbuto, trucker, who cost the Commonwealth of Pennsylvania $15,000 by using its highways to haul a triple overload. John's blithe disregard for public property lends special point to the statement made this week at Providence, R. I., by Laurence F. Whittemore, president of the New Haven, that "the overloading of trucks" represents a "shortsighted policy of exhausting our highway system." "Public apathy," Mr. Whittemore further said, "is bankrupting the country's transportation system." His talk is also reported in the News section.

NEW DIESELS: Three new Diesel locomotives—the F7 and FP7A for freight or heavy-duty passenger service and the E8 for high-speed passenger work—have been announced by the Electro-Motive Division of General Motors Corporation. They are described in an illustrated feature article which starts on page 42.

ON THE HOME FRONT: Speeches such as the one made by Winston Churchill last week at Boston serve a useful purpose—which *Railway Age* heartily approves—in keeping Americans alert to the dangers of militant foreign Communism. But where is America going to find the spokesman who will do an equally effective job of arousing our people to the equally serious danger of subversive domestic Socialism? It's a good question—and a difficult one—because so many of the very business leaders who talk so much to each other about the perils of socialism in the abstract, are themselves guilty of *practicing* socialism in its application to transportation. The question is explored at greater length in our leading editorial.

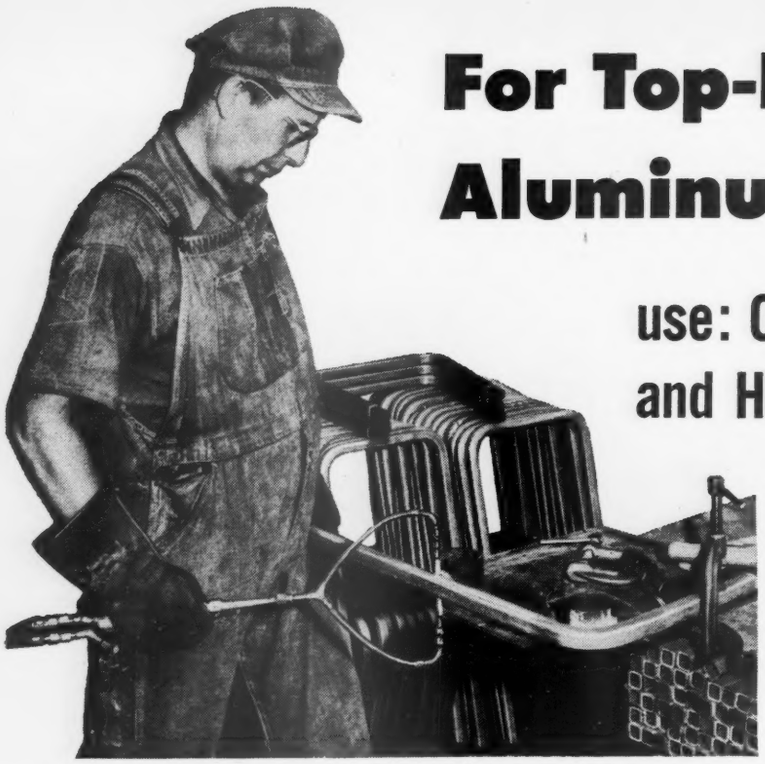
IDEAS FROM SWEDEN: The Swedes are an ingenious people—more given, as a general rule, to minding their own business than to blowing their own horn. No small part of their native ingenuity has been devoted to improvement of their national railroads, which are featured in a pictorial spread on pages 58 and 59.

C.P.R. TICKET PRINTER: An automatic ticket printing machine, which saves many hours of station accounting, is in use in the Canadian Pacific's Windsor Station at Montreal. A description of the machine and of the accounting data which it records appears on page 52.

For Top-Notch Aluminum Fabrication

use: OXY-ACETYLENE Heating and HELIARC Welding

Trade-Mark



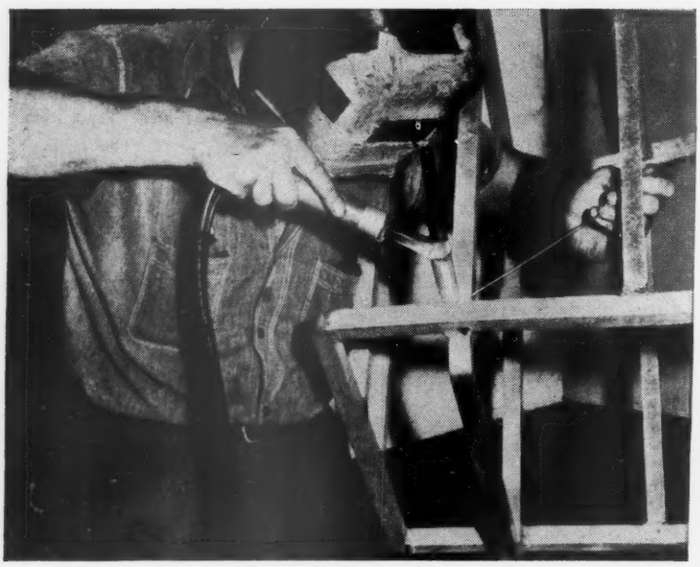
Using a standard blowpipe and double flame-tips, the aluminum tubing chair part is quickly heated to produce a smooth bend.

This car shop saves time and money on the fabrication and repair of aluminum equipment by using oxy-acetylene heating and HELIARC welding. Oxy-acetylene heating helps produce smooth crack-free bends in aluminum tubing and other extruded shapes. HELIARC welding is the fastest method to make strong, smooth spatter-free welds that require a minimum of finishing operations.

It will pay you to adopt oxy-acetylene and HELIARC welding as the "team" in your shops to make or repair aluminum equipment. OXWELD can show you how.

If you are interested in learning more about HELIARC welding, write for booklet F6291.

P.S. When your HELIARC outfit is not busy on aluminum you can use it for building and repairing stainless, Everdur, monel, bronze and other hard-to-weld metals.



HELIARC welding the chair parts using OXWELD No. 23 aluminum rod and type HW-4 torch with 150-175 amps.

Finished aluminum lounge-chair frames. Six bends are made by heating with the oxy-acetylene blowpipe.

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WHAT MR. CHURCHILL DID NOT SAY

A house can be toppled over just as surely by termites in the woodwork as by touching off a charge of T.N.T. in the furnace—but the explosion, or threat of it, will draw much more popular and press attention than the destructive insects will. Thus it is that politicians, ever alert for the spectacular, usually find much more to worry and talk about in the Moscow menace than they do in the operations of the thousands of domestic socialistic intriguers in government, business and labor.

No one could possibly ask for a more convincing or impressive example of this tendency than Winston Churchill has provided. His learned and moving speech at Boston last week was worth a whole cargo of atom bombs in the cause of Western defense—by its effectiveness in arousing determination to resist all aggression from the East. Nevertheless, the ship of state in Britain and America is not being threatened any more seriously or relentlessly by Moscow than it is by socialist invaders within the domestic economy, who if not overwhelmed will send the vessel to the bottom of the sea as surely as any external attack could possibly expect to do.

Mr. Churchill does not do nearly as well in his fight against the domestic enemies of political and economic freedom as he does in mobilizing opinion against the Reds. In fact, to judge from reports from Britain, the Conservatives over there are not making any more headway against their Socialist party than the Republicans on this side of the Atlantic are making against the New Dealers, and for practically the same reason. Says the London "Economist":

"The Conservative party has been so anxious to avoid the odium of opposing the social policies of the present government that they have jettisoned most of the logical grounds for criticizing its economic policy. . . . The Conservatives have over the past three and a half years confounded jibes against the Socialist government with the presentation of an alternative policy. For both of these defects Mr. Churchill must take a heavy personal share of the blame."

"Hard Thought" on Domestic Issues

The "Economist" goes on to acknowledge Mr. Churchill's greatness as a war leader and as a statesman in international relations, but it complains that he is unwilling to engage in the "hard thought" on domestic issues necessary if his party is to develop a coherent policy; and that he has failed to be "an assiduous practitioner of parliamentary strategy." Similar criticism could be justly made in this country of the Republican party, the conservative Democrats and most business leadership.

This paper rejoices with all other loyal Americans in Mr. Churchill's effective labors at awakening the Western world to alarmed awareness of militant

Communism, just as it does in the belated awakening of political leaders in this country to this peril. Meantime, however, what about the socialist bugs which are chewing relentlessly but inconspicuously away at the entire fabric of the domestic economy? Are these to continue indefinitely at this activity without effective opposition—either in Britain or over here? If so, the Muscovites can win World War III without firing so much as a cap-pistol. All they need to do is to sit tight until Western productivity and solvency disappear, and then walk in unmolested.

This country and the rest of the Western nations have no greater need in the way of leadership than they do for a spokesman who will dramatize for popular understanding the simple fact that private business cannot invest for increased productivity (the only source of a rising standard of living for everybody) the money which politics forces it to pay out in taxes for subsidies or "free" governmental services; and for increased wages or easier conditions of labor which are not matched by increased production. In Britain the Labor party is running what the "Economist" calls a "sugar-candy state," fanatically "piling expenditure on expenditure and tax on tax" in "fearless pursuit of 'social security' . . . " and in "unwavering patronage of control and restriction," while banishing practically all net reward for increased efficiency of production, and enforcing no penalties for inefficiency. If there is any difference between Westminster and Washington in these things, it is one of degree and not of kind. Meantime, in both countries "moderate" opposition leadership follows the futile formula of "me too—but a little less."

There is, however, no use in wringing the hands—and, for transportation people, even less point in lambasting the New Dealers, on the apparent theory that it is safer and more expedient to denounce skulduggery outside the family circle than within it. The time and place to administer remedial treatment to a scalawag is wherever and whenever hands can be laid on him—which means the rascal nearest at hand, and not the one farthest away.

A Needed Housecleaning Job

Businessmen desirous of serving the cause of economic and political freedom can take action much more effective than the speeches they go around making to each other against the bureaucrats and the leaders of the unions. There is enough of a housecleaning job for them to do right on their own doorsteps—in combatting socialistic mischief in the transportation business—to keep their patriotic zeal fully occupied for a long time. The persistent neglect by businessmen, who have every reason to know better, to correct the economic wrongs which their political power insists upon or tolerates in the transportation industry—that is, their refusal to demand that every branch of transportation be placed upon an equal basis of taxation and self-support and that railroading be no more vigorously regulated than its rivals—morally disqualifies them from throwing stones at the unions and the New Dealers. There is no socialistic or restrictive policy that agrarian, union, and bureaucratic radicals have tried to apply to industry in general that some of the nation's leading businessmen and business organizations are not pursuing against the railroads.

If leaders of industry and transportation could be persuaded to transfer some of the energy, intelligence and competence which have brought them to the top of their own companies to the larger field of waging genuine, consistent and determined warfare on the oppressive political environment in which private business now has to operate, there is no doubt at all that impressive victories could be won. A first effective step in this direction might well be for railway leaders to set forth the minimum, simplest, and most practicable changes in political treatment which are needed to restore this industry to a reasonable degree of esteem in the eyes of investors—and then to ask all businessmen to support this program, not in the selfish interest of the railroads, but in the common interest of all private business and the national welfare.

MAINTENANCE LABOR VS. STRONGER TRACK

The large and sudden increase in the per-hour cost of track labor makes a penetrating study of the economy of building increased durability into the track structure very much in order. Maintenance engineers have long recognized that a track structure having greater stiffness and longer life would conserve labor. This is one of the primary reasons for the trend toward heavier rail, longer ties, deeper ballast sections and stabilized roadbeds. Increasing wages of maintenance workers in recent years have contributed to this trend but, as long as these increases were not disproportionate to similar developments in the economy as a whole, the basic relationships between the costs of labor and materials were not seriously disturbed and there was no special urgency in extraordinary attention to the labor component.

But the 40-hr. week will bring far-reaching changes. These can be illustrated by comparing the trend of wages of railroad maintenance employees with that of the wages paid to workers in steel mills. By the latter part of 1948 the hourly wages of maintenance employees had increased 107 per cent over the 1939 level. During the same period the hourly wages of workers in rolling mills had increased 96 per cent.

Now however, when railroad maintenance employees go on the 40-hr. week, their hourly wages will rise to a level 162 per cent above 1939, or more than half again as much as the increase in the pay of the workers who make steel rails.

Does this great discrepancy not suggest that the railroads will be able to buy man-hours relatively more cheaply in the form of heavier, stiffer rail than in the form of labor for keeping the track to line and surface? A recent study revealed that in heavy-traffic territory the total annual maintenance cost of track laid with 132-lb. rail, including carrying charges, is about 25 per cent less per mile than for 100-lb. rail. With the man-hour charge for maintenance labor about to undergo a sharp increase, it follows that the economy of the heavier rail sections will be still further enhanced.

The shorter work week for maintenance employees is no mere evolutionary change—it is a major upheaval with implications going far beyond the mere physical problems involved in putting it into effect.

A NEW APPROACH TO AN OLD PROBLEM

"All over the country banks, insurance companies, financial institutions and investment groups are constantly surveying their portfolios of stocks, bonds and other securities. These are paper evidence of ownership of manufacturing facilities, including machine tools, in plants of manufacturing companies in the country. In nearly all cases there is an investment committee . . . to watch these securities carefully in order to sell some and to buy others as changes appear in the position of the companies represented by these certificates . . . .

"The same principle of careful scrutiny of ability to maintain a position should be embodied in the organization of the plants represented by the securities in these portfolios. There should be a committee to see that the major investment of these companies, that is, machine tools, is kept in order, for it is upon the condition of this investment that any plant's ability to maintain its position or improve its prospects depends."

This quotation from a recently issued bulletin of the National Machine Tool Builders' Association, entitled "The World's Best Investment," states clearly one of the major needs of the railroad industry with respect to shop machinery and equipment. One of the factors operating against the profit-earning abilities of most railroads is that the same financial managers who are so keenly alert to the possibilities of impairment of financial position in a securities portfolio seem not to be aware at all of the parallel dangers inherent in the change of asset position through obsolescence, of such physical facilities as the shops and shop equipment used to maintain cars and locomotives.

The railroads' investment in shop machinery and equipment is a substantial sum even in these days of astronomical figures—a half billion dollars—and it has been estimated by those in a position to know that more than 75 per cent of this investment is not only obsolete but is definitely unsuited to compete in today's race even with machine tools and mechanical facilities of ten years ago, let alone the high-capacity labor-saving units that have been developed during the past five years.

It is difficult to understand why, when more than 80 per cent of the motive power of this country is still of the reciprocating steam type, so little interest is shown in the economies which could certainly be secured by modernizing the facilities used to service and maintain more than 30 thousand steam locomotives. On most roads where Diesels have replaced steam units on the better runs, the cost of maintaining steam power has risen. Aside from increased costs of labor and materials, the principal reason for the mounting expense of maintaining steam locomotives has been that, with the coming of the Diesel, many railroad officers apparently decided that the steam locomotives would soon be gone and, consequently, that there was no good reason to spend money on maintenance facilities for them. This opinion is derived from erroneous assumptions, because a very little calculation will demonstrate that thousands of steam locomotives are still going to be in service when the present generation of railroad men has gone to the Great Beyond.

Within the past year, particularly, many comprehensive programs for modernization of locomotive facilities have been held in abeyance. As one shop engineer expressed it, "To buy anything that costs more than $100, we'd have to call a meeting of the board of directors." Well, maybe that is just what is needed, for the portfolio of investment in the shops and engine terminals of most railroads is definitely in need of scrutiny—and at the very highest level of authority and responsibility.

INDEX TO VOLUME 125

The index to the latest volume of *Railway Age*, July to December, 1948, is now ready for distribution, and copies may be had by those subscribers desiring them. Requests should be addressed to the Circulation Department, *Railway Age*, 30 Church Street, New York 7, N. Y. Subscribers who have in previous years made application for the index need not apply again; they will continue to receive it as long as they continue to subscribe.

ELECTRO-MOTIVE ANNOUNCES

Electro-Motive F7 3-unit Diesel recently delivered to the K.C.S.

Three new main-line Diesel locomotives, designed to increase the tonnage per train, or to speed up schedules of present-length trains, have just been announced by the Electro-Motive Division of General Motors Corporation, La Grange, Ill. The new F7 and FP7A models for freight or heavy-duty passenger service supplant the F3 general-purpose locomotive brought out in 1946, and the new E8 model succeeds the E7 high-speed passenger locomotive which, with its predecessors, powers more than 150 of the nation's best known name trains.

All three of the new models embody increases in train-heating capacity; extend the life between major overhauls; permit the use of cheaper grades of fuel oil; and make possible faster and more economical maintenance. Tractive force is increased as much as 25 per cent for all types of terrain over the locomotives they supersede, permitting railroads to make further important reductions in expensive helper service over heavy grades and to increase tonnage on level routes.

Dynamic brakes are made available in the new high-speed passenger locomotives and the automatic transition, successfully used in high-speed passenger locomotives, is made basic equipment in the new freight power. Faster passenger-train schedules are made possible by increased water capacity for train heating, thus lengthening the mileage between necessary water stops.

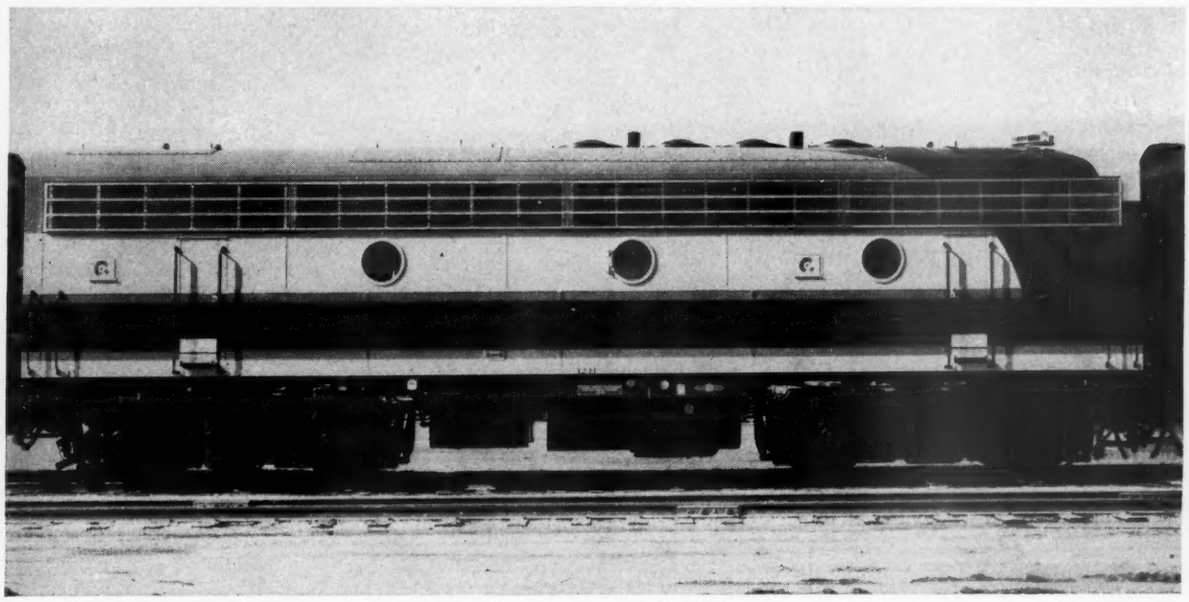
The new locomotives have been designed so that old F units now in railway service can be operated with the new F7 and FP7A units and old E units can be operated with the new E8 units. This permits interchangeable use and protects railroad investment in older E.-M. locomotives.

New traction motors and generators, developed by Electro-Motive, utilize new silicon insulating materials and new methods of application of insulation. This construction, plus improved cooling, permits higher load factors which are translated into greater tractive force. The new motors and generators are designed to have considerably longer life between major overhauls than the present electric transmission equipment.

A new injector, perfected for E.-M. Diesel engines, broadens the range of fuels which may be successfully used. Heretofore, Diesel locomotives required fuel of at least 55 cetane rating. The new General Motors injector makes it possible to use cheaper fuels of as

THREE NEW DIESEL ROAD LOCOMOTIVES

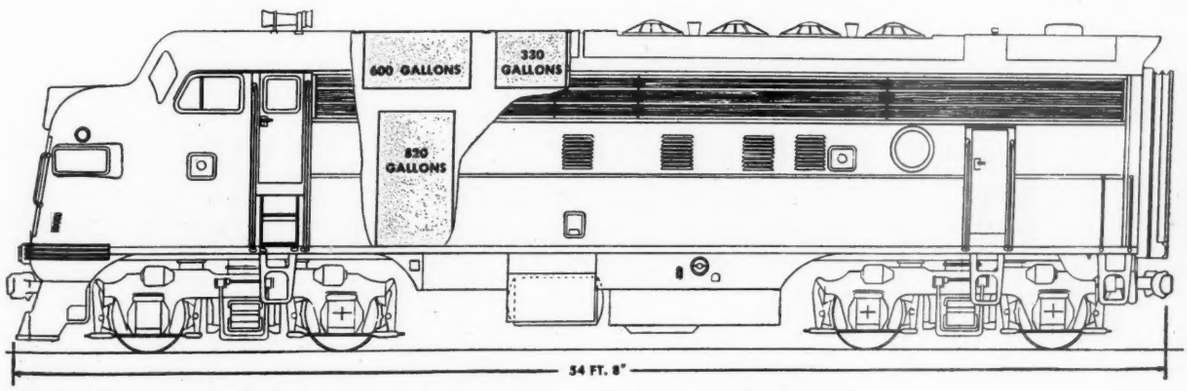
F7 units for freight and heavy-duty passenger service and E8 units for high-speed passenger trains incorporate numerous improvements in basic and detail design



One of the new F7 B-units

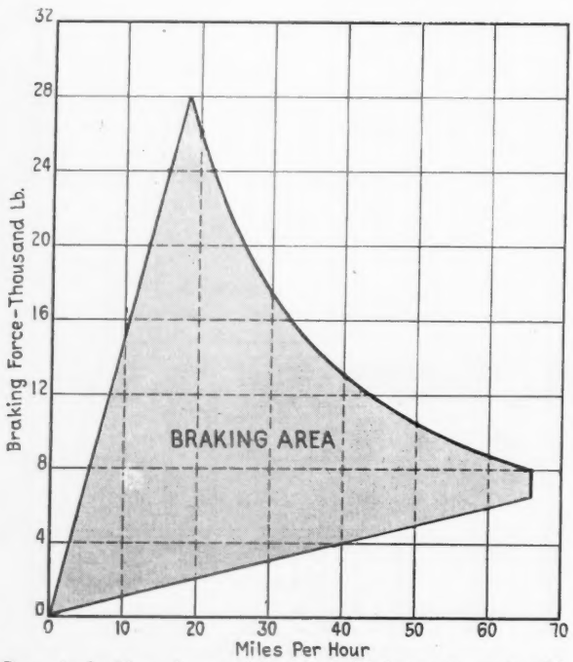
low as 40 cetane rating. An important by-product of the new injector is the reduction of peak shock cylinder loads for all qualities of permissible fuel, with resultant longer engine life.

The F7 locomotive retains the same weight, length and height dimensions as the F3, plus the wide range characteristics made possible by the eight optional gear ratios and variations in number of units that



Elevation diagram of the FP7A Diesel locomotive unit showing location of the water tanks

Details of the F7 front-end arrangement



Dynamic braking characteristic of an F7 locomotive unit with 62:15 gear ratio

can be coupled or uncoupled to fit the locomotive capacity to the size of the train. However the range is broadened by the increase in tractive force of the F7.

Because of the new capabilities of Electro-Motive traction motors and generators, the maximum continuous tractive force of the F7 unit is increased to 52,400 lb., as compared with 42,500 lb. in the F3. Horsepower rating of the Diesel engine remains at 1,500 for propulsion alone. Top speed remains 102 miles an hour as in the F3, but with its greater tractive force, the F7 will be able to haul heavier tonnages.

Heavier Tonnage Possible

The F7 will haul 25 per cent more tonnage up a 1 per cent grade at continuous rating and 30 per cent more tonnage at short-time ratings for two hours. Since there are only a few grades in the United States which require more than two hours to climb with the heaviest train permissible with present drawbars, the effect of this is that most railroads will be able to increase tonnage 30 per cent with the new units.

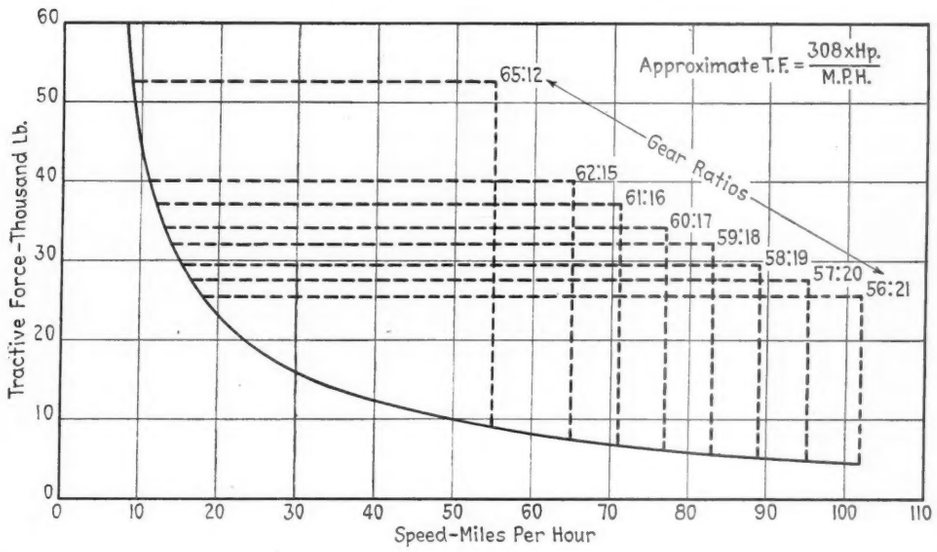
The capacity of the electric retarding, or dynamic, brakes of the F7 has been increased so that 23 per cent more tonnage can be safely controlled. The capacity of the brakes has been increased from 540 to 600 amp. in the F7. This increase in dynamic braking capacity is important in that it will enable the railroads to decrease further the use of air brakes with additional savings in brake shoes, wheels and air-brake equipment.

Increased pulling ability of the F7 is the direct result of the new Electro-Motive-developed hot-pressed silicon and glass insulation for coils in the traction-motor armatures, and newly designed, newly insulated field coils, plus greatly improved motor cooling.

The elimination of organic material in the insulation by using silicon, glass and mica, which are practically unaffected by heat, cold or moisture, would permit increase of traction-motor temperature, but with the improved insulation technique and better motor cooling, the higher ratings are said to be accomplished with an actual decrease in traction motor temperatures. Substantially increased service life for the new motors is anticipated. These improvements can be built into existing Electro-Motive traction motors as present locomotives come in for repairs.

Automatic transition, successfully used in General Motors high-speed passenger locomotives for many years, is now standard equipment on F7 heavy-duty locomotives. Without automatic transition, the changing of connections between traction motors on the F series locomotives to give variations in performance for varying requirements in starting, accelerating and maintaining speed with heavy loads has been a manual operation performed with a control lever by the engineman. Damage to equipment sometimes has resulted from improper handling of the control. Automatic performance of the various "shifts" as a locomotive gathers or reduces speed relieves the operator of this responsibility and contributes to greatly improved train handling.

The increase in train heating capacity is one of the most noteworthy improvements in the F7. F3A units were equipped with 1,600-lb.-per-hr. steam generators



Speed-tractive-force curve of an F7 1,500-hp. Diesel-electric locomotive unit. Eight gear ratios are shown

and B units with 3,000-lb. generators. Thus a two-unit 3,000-hp. F3 locomotive in passenger service could have a maximum steam-generator capacity of 4,600 lb. per hr. This normally has proved to be sufficient, but the addition of extra cars and mixing of old and new cars in consists during and since the war, in extreme sub-zero weather, sometimes has resulted in inadequate heating.

In the new F7, the A units have 2,500-lb. steam generators and the B units can be equipped with either 2,500-lb. or 4,000-lb. generators. Thus the total in a two-unit F7 locomotive may be 6,500 lb., or an increase of 1,900 lb. over the F3 maximum. In a four-unit F7, the total capacity can be 14,500 lb. as against 10,600 lb. in a four-unit F3.

More Water Capacity in the FP7A

The new FP7A incorporates all the improvements of the F7 and is four feet longer, permitting insulation of an additional 950 gal. of train-heating water. Total water capacity is 1,750 gal. The F3A units had a maximum of 800 gal. water capacity. This special locomotive unit was designed to meet the needs of railroads with long passenger runs in which it is desirable to lengthen the distance between water stops. The FP7A can be combined at will with F7 or F3 units. It is built only in A units.

Features of the E8

Improvements in the E8 high-speed passenger locomotive include greater continuous tractive force; increased horsepower; increased train heating; dynamic brakes; a.c. drive for all auxiliaries, eliminating all V-belts; controlled engine-room temperature; pressurized, completely-filtered engine-room air system; and increased train-heating water capacity.

The E8 retains the major, proved advantages of General Motors high-speed passenger locomotives of the past, notably reliability on the road and speed with stability and safety that come from dual power plants, six-wheel outside swing-hanger truck design, and locomotive length, height and width with balanced distribution of weight. The same improvements in traction motors described for the F7 are utilized in the E8.

Horsepower rating of the E8 is raised to 2,250 per unit as compared with the 2,000 hp. rating of the E7. Maximum continuous tractive force per unit is 27,000 lb., compared with 21,400 lb. in the E7.

The alternating-current auxiliary drive, an important feature of the F3 in 1946, is standard equipment in the E8, made possible by the new a.c.-d.c. generator especially designed for this locomotive. All V-belt drives are eliminated in the E8 and the isolated a.c. drive for accessories permits a simplified arrangement of engine-room equipment that facilitates faster maintenance and repairs with lower costs.

As in the F7, outstanding improvement in train-heating equipment has been made in the E8. For years, 2,250-lb. steam generators were regarded as suitable for a 2,000-hp passenger unit. During the past two years this has been increased generally to 3,000 lb. per unit. But postwar experience has indicated that still greater capacity is needed to adapt this locomotive to use with longer trains and mixed equipment. By rearrangement of the engine-room equipment, each E8 unit now can have either one 4,000-lb. steam generator or two 2,500-lb. steam generators.

For instance, in a two-unit E7 locomotive, a maximum of only two 3,000-lb. steam generators gives a total of 6,000 lb. capacity. If one boiler fails the train will lose half its heat and the remaining 3,000 lb. may not be adequate in bitter weather. In two units of the E8, four 2,500-lb. generators may be installed, giving a total of 10,000 lb. capacity. If one boiler fails, the remaining three still will deliver 7,500 lb., or 1,500 lb. more than the old maximum in the E7.

The train-heating water range of the E8 also has been materially increased by the addition of an extra 600-gal. roof tank, bringing the total per unit up to 1,800 gal.

Engine-room air is taken from the sides of the loco-

motive, and forced through filters by an a.c. motor-driven fan into the engine room, delivering an adequate supply of clean air to the engine room under pressure. This new feature not only serves to increase engine life but also reduces maintenance costs on other equipment located in the engine room because the pressurization tends to prevent dust and snow from seeping in through any leaks that might develop after long, hard service of the locomotive.

Engine-room temperature control in extreme cold weather is aided by a new arrangement of shutters which allows a portion of the warm, discharging air from the engine-cooling system which is isolated from the engine-room air, to be directed through the engine-room filter bank. This raises the temperature of the engine room.

This feature with jacketing of pipes practically eliminates the danger of freeze-ups in the engine room which sometimes have been encounterd in extreme sub-zero weather in the past.

Hot-weather operation of the E8 is substantially improved by increased capacity of the engine-cooling system, with more effective air flow and greater fan capacity. The same general cooling system successfully employed on the F3 for the past three years is used on the E8.

A simple expedient has been adopted to protect the under-floor fuel tank from puncture by objects hurled up from the right-of-way. It consists of a new double tank with an outer compartment containing water and an inner compartment carrying fuel. Besides protecting the fuel tank, this arrangement makes it possible to eliminate cold weather fuel problems by steam-ejector heating of the water in the outer tank.

POSSIBILITIES FOR PROFITABLE RAILROAD RESEARCH

Increased economic and technical study is essential to offset effects of rising costs and stabilized or declining revenues

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Before we can proceed with a discussion of research possibilities to aid in solving problems of the railroads, it is necessary that these basic problems be stated clearly. In my view, the underlying problems of the rail transportation field fall into five categories.

Five Major Problems

First, the railroad industry is not experiencing a sufficient *rate of return* on net investment to enable it to keep pace with the requirements of the times. There is no serious problem in securing capital for new rolling stock, but the situation is quite different in the securing of funds for improvement of plant and fixed equipment. Since 1930 the percentage of new investment money applied to fixed equipment in the railroad field has been seriously reduced. A few more years of this condition, and the spread between new investment in fixed and in moving property will indeed be critical.

Second, the level of rates, even though now increased to a precarious point, has not been maintained in keeping with the *level of costs* of producing service. The railroads then, are faced directly with the problem of lowering costs per ton-mile or pricing themselves out of even more markets. The rigid labor structure in the industry makes cost reduction an exceedingly difficult undertaking.

Third, the *diversion of traffic* to competing forms of carriers has indeed produced cause for alarm. The volume of industrial products shipped by rail viewed alone exhibits an increase of approximately 20 per cent from 1929 to 1948—but the volume of goods manufactured increased about *80 per cent* during this same period. The real extent of traffic diversion is obscured by lack of adequate statistics. There is ample evidence, however, that recent rate increases have accelerated the trend. For example, transcontinental shippers of such items as whiskey, cigarettes, aluminum, steel and canned goods are turning increasingly to motor transportation because rates are lower, damages are less and service is faster. During 1944 the railroads carried almost three-fourths of intercity traffic; this volume was down to less than two-thirds for 1948. Real danger may lie ahead for the railroads unless a way is found to prevent this diversion of traffic.

Fourth, the railroad industry is suffering from lack of sufficient *advance in technology*, especially as compared with other forms of carriers. No real basic changes have been made in rolling stock for many, many years. Handling equipment. lading facilities, specialized car equipment and maintenance facilities have undergone little change since the turn of the century. The railroad industry today is clearly not a technologically based industry, i.e., it has not depended primarily upon technical advances to maintain itself competitively.

An abstract of an address to the Pacific Coast Transportation Advisory Board, Oakland, Cal., March 17.

Fifth, the railroad industry has been faced with the necessity of operating under the close surveillance of governmental regulatory bodies—yet without a coordinated *administration of transportation policy* for the nation as a whole. The transportation problem of this country is essentially one of competition and some way must be found to use the different types of transportation with a view to best serving the interest of the shipping and traveling public with fairness to the competing agencies.

Applied Research Essential

If these five basic problems be accepted as the major problems of the railroad industry, it is appropriate, then, to explore some possible avenues for their solution—to the advantage of not only the carriers, but also the shippers and the public. Research in itself, of course, will not solve any of these problems, but a tremendous amount of applied research work is required in any effective plan designed to cope with the issues facing the railroad industry.

In connection with the extent to which the railroad industry supports an active research program and the extent to which it should engage in research, I have no specific answers to offer. On the other hand, there are some specific possibilities for activation of new research programs and acceleration of existing research efforts within the industry. I propose to take the five problems in turn and to indicate some specific research suggestions which will aid in bringing about a proper solution to each.

How Many Dollars?

The first problem is that of the rate of return on invested capital and the non-availability of funds for needed improvements in facilities. It is obvious, of course, that if the rate of return on invested capital within the railroad industry could be raised materially, many of the other problems of the industry could be solved with relative ease.

If this problem is to be solved successfully, an exhaustive investigation must be made as to just what rate of return, and more important, how many dollars, are really required to achieve the necessary improvements in fixed equipment. What is the total and the annual cost of such a program? What will it mean in the level of rates? What will it mean in the form of annual subsidies? These are questions that should be answered by an extensive program of economic research. The study to have maximum validity should perhaps be financed and conducted by direct action of Congress. In any event it should be accorded maximum publicity to form the basis for development of national policy. The need for capital improvements in the industry today is so great that it is questionable whether existing rates of return and capital availability will ever provide sufficient funds.

To Reduce Unit Costs

The second major problem is concerned with the level of rates and costs. Although rate increases have not kept pace with the increased costs of providing railroad service, the solution is certainly not one of wholesale rate increases to provide more revenue. In the long run there can be only two courses of action. One is to increase the level of service at existing rates to increase the total volume of traffic. The other is to decrease the costs per unit of producing service on the basis of existing rates. The second course offers the greatest possibility for success.

There is now some indication that the peak level of railroad traffic may have been reached, hence increased service at existing rates may not produce the required revenue. On the other hand, a concerted program of reducing costs under the existing level of rates will provide some needed revenue and may pave the way for future rate decreases. Unfortunately, one of the ways to reduce costs is to spend money—i.e., spend money in such a manner that more efficient methods may be applied. Along with most of these efficient operations will come an increased quality of service to shippers. It seems appropriate then that increased economic research be applied along several lines to widen the spread between costs and revenues.

Better Operating Procedures

The first of these possibilities concerns the development of better operating procedures. Certain problems relating to railroad operating procedures can be dealt with effectively without large scale revisions in operating practice. Foremost among these is immobility of cars. Any reduction of time lost in yards and terminals would be multiplied fourfold in its effectiveness on the operating efficiency of trains, since a freight car spends roughly four times as much time in yards and terminals as in actual service. The technical implementation of such a change would probably require, as a first step, better communications systems in yards. Of nearly equal importance is the problem of car handling in freight yards, where a substantial amount of lading damage is encountered. The immobility of freight cars during about 21 out of 24 hours of the day must be improved. This figure on car utilization contrasts with the corresponding figures of 12 out of 24 hours in the case of long distance trailer-trucks and of 14 out of 24 hours for cargo planes. Shippers are complaining increasingly that railroad freight takes too long to get to its destination. Unfortunately, the facts bear out these complaints.

The second of these possibilities for lowering costs is an increased mechanization of loading and unloading operations. Increased mechanization offers a means of improving utility of cars under present conditions. Among such possibilities may be mentioned portable conveyors, monorails, and multiple-deck cars. Any materials handling device which does not require structural modification of cars can find application in the initial phase of development of a mechanization program. Some effective applications have been developed in the handling of cargo, e.g., the mechanical loading of canned goods.

A third possibility for economic research in the field of costs and cost control involves a determination of the real costs of rail service for given products and geographical areas. There is a constant demand in rate hearings for an adequate formula of cost distribution. While admittedly the problem of proper cost

TRAVELING CLINIC—A new and modern medical car, equipped with the latest instruments for physical examinations, first aid and vision testing, went into service recently on the Canadian National. The car will serve as home and office for the doctor and his wife. Shown here in the examining room are, left to right, E. R. Battley, chief of motive power and car equipment, C.N.R.; Nurse B. Boudreau of the medical department, and Dr. K. E. Dowd, chief medical officer of the company. The new car consists of a waiting room, examining room, bedroom, bathroom, kitchen and combination living and dining room

distribution is a difficult one, an adequate solution must be developed if rates are ever to bear any relation to real costs, and if a system of vertical and not horizontal rate adjustments is ever to be established. One gains the impression from available evidence that this problem is perhaps not being approached in a thoroughly analytical manner. The recent Interstate Commerce Commission hearings are a case in point.

It is, of course, relatively easy to express the policy that costs per unit of service must be decreased. Execution of such a policy is an entirely different matter. Nevertheless, we cannot overlook the fact that it is considered by a large segment of our people that the railroads are inefficient. The railroad industry usually counters with an indication that the percentage of freight costs to value of product transported is lower for railroads than for either motor or air carriers. We must ask ourselves, however, whether we are doing the job as efficiently as possible—not whether we may be doing a better job than someone elese. The situation shippers and the public do not overlook is the fact that from car ordering to car docking, from ticket sale to station arrival, from l.c.l. dispatch to arrival, and from express pickup to delivery, little change has occurred in railroading practices for many, many years. Some high-speed freights are an exception, of course.

It seems to me that we must take one of two actions: (1) Develop means for improving efficiency of operations even more, or (2) look forward to a gradual deterioration of the railroad position. Perhaps the development of methods for reduction of costs per unit of service is by far the most important economic research possibility in the rail transport field. I do not overlook the tremendous effect of union labor practices upon productivity per man-hour in the railroad field. Are we certain, however, that all the facts are known as to the effect of such practices upon cost of service, and can we be certain that all possible and feasible efforts have been or are being made to increase efficiency of railway operations? With another increment to the annual wage bill in the offing, the problem will indeed become critical. We must find some means for securing the support of labor in such a research program. The goal is not a decreased labor force but higher productivity.

The third major problem of the railroad industry is diversion of traffic to competing carriers. The only answer is to increase the quality of service offered, especially since there is little immediate prospect for rate decreases.

To Stop Traffic Diversion

There are several possibilities for research in this general area. The first involves increased use of high-speed block trains. Such a train can use advanced equipment, such as improved draft gears, roller-bearing trucks, and tightlock couplers. Special attention can be given to the care and speed of handling in yards and terminals. Fast freight service between large centers of population can utilize effectively improved equipment and should be attractive to the customer. An increased first cost of car can be tolerated since the buyer operates the car and benefits from its increased earning capacity. Similar trains are now in existance. Justification for general expansion of such service requires an economic analysis. However, the prospects for its continuance and expansion appear rather promising. If the block train is adopted on a large scale; it would seem reasonable to suppose that after perhaps 25 years this new equipment would be standard rather than the exception. The use of block trains will require some new rolling stock immediately without requiring immediate replacement of all existing freight cars. The block train is thus seen to present one means of introducing modern equipment in the face of current economic conditions, and in advance of the time when it will be demanded generally.

Before the development of the motor vehicle it was generally believed that the optimum train speed was that which produced the maximum number of ton-miles per hour. This line of thought gave rise to the movement of heavy tonnage at low speeds. Today, two new factors enter the equation; namely freight revenue, and a requirement for more rapid delivery of goods. A new balance must be struck. With modern motive

power having maximum output at higher speeds, ton-miles per train-hour may be sustained, and perhaps increased, by moving better equipped and more efficient rolling stock at faster speeds. At any rate, high-speed block trains operated in conjunction with terminal truck service are one means whereby railroads can halt diversion of traffic to other carriers.

A second possibility for reseach to improve service and halt diversion of traffic involves the extent of lading damage. The cost of such damage each year amounts to over $100 million, a direct loss to the railroad industry and a deficiency of service to shippers. It has been estimated that the annual cost of preventative packaging borne by shippers of this country is approximately $1½ billion more than would be necessary if the same items were, or could be, shipped by trucks or airplanes. There is little question but that an exhaustive operations analysis is required to aid in the program of reducing the economic waste of lading damage. Considering the extensive cost of lading damage each year, the available facts on causes must be considered as being meager indeed.

An Integrated Container System?

The subject of lading damage brings us to the third possibility for research aimed at improving service and halting the diversion of traffic. This possibility involves the integrated container system. The use of containers has not met with general favor in this country, and in fact, is even in disrepute in some segments of the railroad industry. It has been estimated that there are less than 10,000 containers in service on American railroads today. The principal reasons for the unpopularity of container systems in America, even though they have been relatively successful in Great Britain, have been the absence of an integrated system matching the integrated railroad system, the general lack of interchangeability among containers, and a failure to ascertain the true economic benefits which could result from the full application of a coordinated container service.

The important point to remember about the container is its universality. It is not limited to l.c.l. freight. One study has indicated that over 90 per cent of all carload tonnage is susceptible to movement in containers. This potential volume is indeed significant. It has been conservatively estimated that the potential container traffic in this country at the present time is in the order of $2 billion per year. A recent study for the Association of American Railroads touched on the container subject by pointing out that the railroad industry is now about equally divided in opinion as to whether or not an integrated container system would expedite delivery service, save warehouse expenses for shippers, permit heavier loading of cars, and serve to to recover some tonnage for rail carriers. Even though there are obvious problems associated with an integrated container operation, the subject is sufficiently attractive to warrant an extensive economic study of its possibilities.

If a container system is to be successfully utilized by the railroad industry, it should be designed to provide door-to-door service at speeds in excess of 40 m.p.h. for about one-fifth of the nation's freight. It must also reduce packaging requirements to the point where they are no more burdensome than those for trucks and airplanes.

A fourth possibility for research with an objective of halting the diversion of traffic is merely an analytical study of the extent of this diversion and the commodities and areas involved. Complete facts are not now available on traffic diversion, hence we cannot be certain of the actions required to regain traffic for rail carriers.

A fifth possibility for research on the general problem of traffic diversion involves not only the railroads but shippers and other carriers as well. The problem is particularly acute on the Pacific Coast. An economic study should be undertaken to determine the extent of, and reasons for, the considerable diversion of traffic from West Coast ports. This study should be designed to indicate where we stand, what commodities have been lost to other ports, the extent of the diversion, what changes are taking place in our national and world markets, what inroads Eastern and Southern ports have made in cargo traditionally moving through Pacific ports, and what is the real extent of industry decentralization resulting from increased freight rates.

Some Technical Possibilities

We come now to the fourth major problem confronting the railroad industry today; namely, the lack of sufficient advances in technology. The traditional policy of American railroads has been to let their suppliers perform their technical research for them. Although there is no gainsaying the many real achievements contributed by these suppliers, the actual users of the products have rarely had a direct hand in the development of their own tools of operation. Whether the research carried out by suppliers has yielded the same benefits as if it had been performed under the guidance of the railroads is open to question. It appears reasonable to suppose that a centralized, systematic, and coordinated research program would have yielded greater results for an equal expenditure than unrelated individual efforts by suppliers. Such individual efforts, of necessity, must entail frequent overlapping, if not outright duplication. On the other hand, certain problems which are of great importance to carriers, but concern their suppliers relatively little, have been neglected altogether too much. Hot box prevention is one example.

The first possibility is the development of improved freight cars. The general state of development of the freight car has been limited by regulations. The most advanced cars approach the current limits set on freedom of design by the A.A.R. Inadequate shock absorption is perhaps the most important deficiency in present cars. It is responsible for a large portion of the huge annual bills for lading damage, for car maintenance, and for protective packaging. The approximate amounts of these bills are, respectively, $100 million, $350 million, and $1½ billion per year. The lack of sufficient impact data makes it impossible to evaluate or to present convincing evidence of needs for improved impact absorption. Very little work has been done to determine the acceleration characteristics which are important in lading or in structural damage. The effect of impact on car structure has not been considered

sufficiently in present designs. This is highlighted by the huge annual repair bill. Designers are cognizant of the need, but have not possessed sufficient data to permit a scientific approach in design work.

The structural efficiency of present freight cars is difficult to evaluate without a better knowledge of dynamic loads and a complete study of the structure. It is evident that the study of stresses and forces acting on car structures and on lading is one of an elastic object in motion. Conventional methods of measuring strength of materials are not sufficient to determine stresses under such conditions, and a purely analytical treatment of this problem is questionable. An experimental approach with subsequent analytical study and interpretation of results is, therefore, necessary.

The problem divides itself into two parts—both amenable to experimentation; one, the effect of dynamic loads on car structure, and two, the effect of dynamic loads on lading. The effect of dynamic loads on structure is of interest to the car designers; the effect on lading is of interest to the designer of suspension equipment. This entire first possibility for research on improvement of freight cars may be summarized by the statement that there is a need for experimental and analytical study to determine the real requirements for a modern freight car. The ultimate effect of such a successful research program will be better service to shippers and lower maintenance costs to the railroads.

A second possibility for technical research in the railroad field involves the design of additional special purpose cars and equipment. It is well-known that special purpose equipment is coming into more general use, but there is a need for increased economic and technical research in this field. Cars equipped with special racks and shelving have been built for use by Sears-Roebuck, Loose-Wiles Biscuit, and other companies. Special devices have been installed in some cars for l.c.l. shipment of frozen foods. The entire field of car refrigeration and the handling of perishable commodities is urgently in need of technical research. Our methods of transporting perishable products by rail have not changed appreciably for many, many years. Another possible field for research on specialized equipment is the transporting of wheat, flour, and other bulk commodities requiring closed cars. The entire field of car specialization would probably be a more effective competitive weapon of the railroads if properly coordinated with overhead handling gear, palletizing, containers and special equipment designed for better handling of bulk commodities. Both the specially designed car and the specially equipped car warrant further study. The need for technical research on refrigeration equipment has been recognized by the A.A.R. by the assignment of a specific research program on the subject to the new Chicago laboratory when it is finished. The effect on shippers of a further adoption of specialized equipment is evident, i.e., better service, less lading damage and lower packaging costs. The advantage to the carrier is derived largely from increased payloads and reduced car damage.

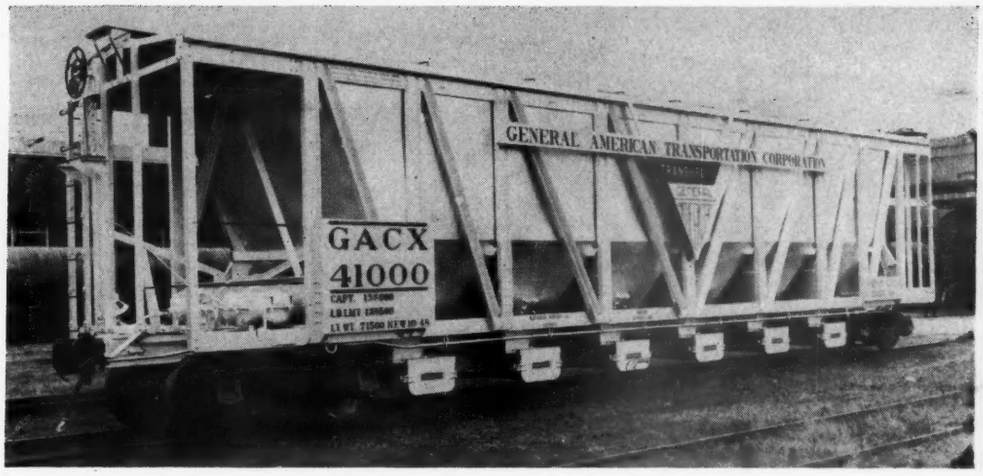
A third area of technical research involves the basic specifications and interchange rules of the A.A.R. These specifications and rules now specify details of construction far beyond functional needs. As an example, the requirement that the center sill of a box car contain a certain number of square inches of cross-sectional area makes illusory any effort to revise the underframe of a car to improve its operating efficiency. The effect of the interchange rules is perhaps even more drastic than the effect of specifications. The requirement that all makers of component parts must conform to certain size regulations to have their product accepted for interchange service is effective in simplifying maintenance and safety. Unfortunately, it is equally effective in stifling development of improved products, except in matters of relative detail.

While it is important in operating economy to demand absolute interchangeability for all parts used in interchange service, this same demand makes it difficult to produce any substantial changes in car performance. It would be preferable from a development standpoint to restrict the A.A.R. specifications and interchange rules to functional matters and to allow the designer to work to a functional specification. The conclusion involved here is inescapable; for real progress to occur in the design of railroad equipment, a means must be found to change present car specifications to a functional basis—and, hence, give the car designer some latitude for design. Under our present plan of operation, a car designer is actually designing to a detailed specification. Perhaps there is even a need for economic research on our entire interchange procedure.

What Kind of National Transport Policy?

The fifth major problem facing the railroads and other common carriers of this country is the lack of a coordinated national transportation policy.

The need for a national transportation policy is concerned primarily with equality in treatment, especially with respect to rates and subsidization. Several suggestions have been set forth at one time or another. They include (1) placing all regulations under one agency, (2) discontinuing governmental promotion of common carrier activities, (3) providing for voluntary coordination of services by the several types of carriers, (4) permitting common ownership of two or more forms of carrier operations, and (5) discontinuing or equalizing government aid to common carriers. I have no specific solution. I do know that the transportation industry as a whole has been under criticism in this country for the past 20 years because the various forms of carriers have often worked against each other. It has often been said that there is no leadership for transportation as a whole in America. It is appropriate, therefore, that the Transportation Association of America has recently launched a two-year study designed to develop the outline of a coordinated national transportation policy and a suggested legislation program for its adoption. This research program is scheduled for completion in 1950 and will be submitted to the Congress for consideration. There is no question but that this so-called "Economic-Statutory" reseach project is a worthwhile venture in organized cooperative research. In connection with a further integration and coordination of our various forms of transportation, a real need exists for an exhaustive study of rate structures and freight classifications.



The Trans-Flo car for bulk shipment of granular products

G. A. T. X. HOPPER CAR FOR GRANULAR PRODUCTS

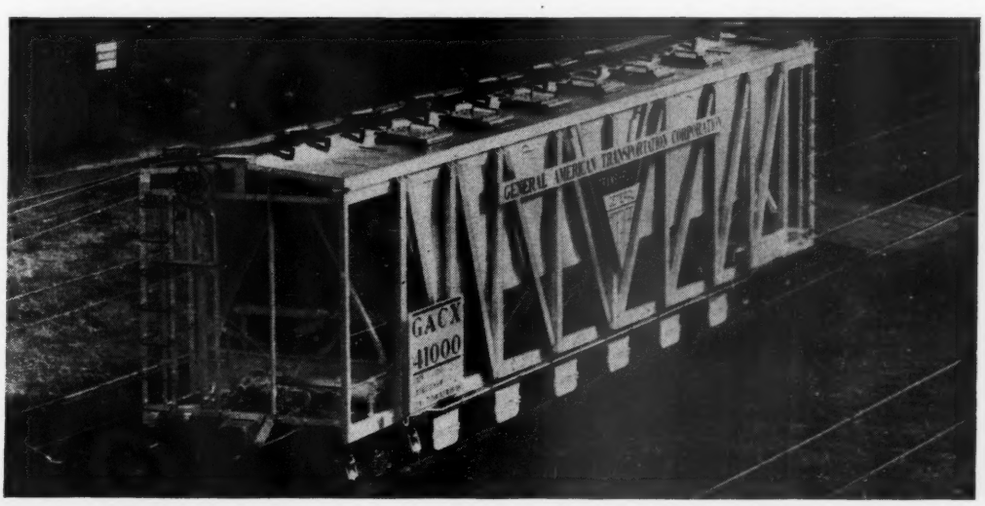
The General American Transportation Corporation, in collaboration with the Fuller Company, Catasauqua, Pa., manufacturers of pneumatic conveying equipment, has developed special equipment which may prove an answer to the problem of bulk shipment of granular products such as flour, now customarily packed in bags and transported in box cars with substantial packaging and handling expense.

In the new Trans-Flo compartmented freight car twelve separate hoppers are built into a framework of steel side and end members. The product to be shipped is loaded through a hatch at the top of each of the hoppers. The inner hatch includes a special filter device, the outer hatch sealing the opening. On arrival at point of destination, the car is unloaded by an air suction device at the bottom of each hopper.

The first completed car, built at the company's Sharon, Pa., plant, was put into test service by being loaded with flour at the Toledo, Ohio, mill of the National Biscuit Company. The car was then dispatched to that company's Atlanta, Ga., bakery where it was successfully unloaded. The car was returned to Toledo and is now being used in shuttle service between there and Atlanta, while traffic officers and engineers of the three collaborating companies observe its operation.

The Trans-Flo car is 53 ft. in overall length and has a capacity of approximately 2,900 cu. ft., equivalent to 50 to 60 tons of milled flour. It has a light weight of 71,500 lb. and load limit of 138,500 lb. In addition to the pneumatic unloading device developed by the Fuller Company, General American's research and development department overcame the difficulties caused by the bridging and packing of the commodity which previously had made efficient unloading impossible. The overall development eliminates all necessity for introducing any internal means for loosening the commodity or breaking bridges that have formed, and accomplishes one of the most desired results, namely, the assurance of no contamination of the transported material through the introduction of foreign substances.

In the development of the Trans-Flo car, General American constructed at its East Chicago Laboratory a plant in which full size sections of the car, a Fuller Company pneumatic conveyor, and storage facilities were installed. These facilities are now being used to study other difficult-to-handle materials.



Each compartment is loaded through a single hatch, six of which are on each side of the car

Fig. 1—H. C. James, general passenger agent of the Canadian Pacific, inserting matrix in ticket machine

F:g. 2—Printing plates are attached to one side of the matrix

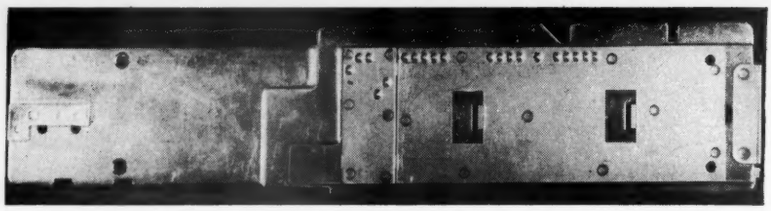


Fig. 3—The other face of the matrix has fingers which activate the mechanism

CANADIAN PACIFIC USES TICKET MACHINE AT MONTREAL

Using a separate matrix for every destination, it prepares a full permanent accounting record and issues tickets with price printed on each

Fig. 4—Rear of machine showing printed tape emerging with all data on transactions

An automatic ticket accounting machine which gives the auditors and accounting department the data they require, and at the same time saves many hours of station accounting for the agent and ticket sellers, is in operation at the Canadian Pacific's Windsor Station in Montreal, Que. It is not strange that this machine fulfills requirements so effectively, because officers of the departments concerned were consulted as to what they needed, and those specifications were submitted to the manufacturer, the General Register Corporation, Long Island City, N. Y.

In addition to saving employees' time this machine has a definite public relations value, according to Canadian Pacific officers, because passengers like to see the price printed on the tickets they purchase.

Prints All Needed Data

There are no keys or buttons to push in operating this machine. A matrix is prepared for each station to which tickets are sold. When a sale is made, the appropriate matrix, the two faces of which are shown in Figs. 2 and 3, is inserted as shown at "A" in Fig. 1. This operation actuates the mechanism which prints the price, the starting point and destination for each coupon, the ticket number, type of ticket, and date, and a coupon or transaction number. All this information is printed on ticket stock which has other data preprinted on its two faces. At the same time that these revenue data are being printed on the ticket, the machine also prints two tapes, original and duplicate, which show the same information as on the ticket, plus such other information as tax, pool portion, special portion for Maine and Vermont, and ticket seller's identification number. The original of this tape emerges from the machine as shown

Fig. 5—Members of committee which set up specifications for machine. At "C" totalizer card is seen in machine. In left hand of Mr. Loeb, fifth from left, is shown control counter which fits on matrix. Committee, left to right, is: L. Marion, ticket agent, Park Ave. station, Montreal; F. V. Stone, assistant to manager, research department; C. Smallwood, chief traveling auditor; F. A. Rutherford, general tax accountant; G. A. Loeb, General Register Corporation; C. F. Gardner, auditor of passenger receipts; Alex MacMillan, chief of passenger ticket bureau; and H. C. James, general passenger agent

at "B" in Fig. 4. It constitutes the auditor's record of transactions by the seller during his tour of duty. The duplicate tape stays in the machine and is removed only by the agent, and becomes part of his permanent record. If it should be desired, an Automatic Control Counter can be attached to the matrix which will number consecutively the number of tickets to each destination, thus giving the auditor of passenger receipts another control for his work. (The control counter is not in use at present.)

One of the outstanding features of this machine is the ease with which the ticket seller who uses it can balance out at the end of his tour. Experience on the C.P.R. indicates that this usually is done in 10 to 15 minutes. One of the factors which makes for this easy balancing out by the ticket seller is the totalizer. At the time the clerk begins his tour of duty he simply inserts his totalizer card (Fig. 7) as at "C" in Fig. 5. The machine automatically prints the total of money taken in as registered by the machine since the last audit. Then, after he is finished for the day the clerk once again puts the totalizer card into the machine and the new total is printed on the card. The ticket seller then by simple subtraction can tell how much he should have in his cash drawer. No involved checking of ticket stock is necessary to balance cash on hand against sales.

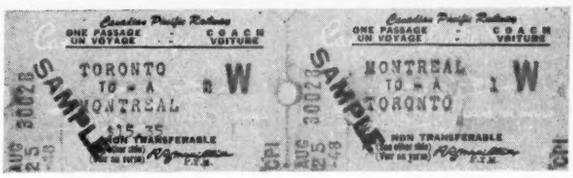


Fig. 6—Sample tickets printed by machine

0140	4.45			
0311	.40	.00		04259 3
0200	2.75	.35		04260 3
0222	2.60	.35		04261 3
0366	9.35	1.20	8.15	04262 3
0215	1.45	.20		04263 3
0615	5.75	.75		04264 3
0150	5.65	.75	4.90	04265 3
0317	1.00	.15		04266 3
0001	15.65	2.05 M		04267 3
0180	2.65	.35		04268 3
0182	2.95	.40		04269 3
0216	1.65	.20		04270 3
0080	4.99	.65 V		04271 3
0190	1.15	.15		04272 3
0165	.60	.00		04273 3
0097	.45	.00		04274 3
0093	1.05	.15		04275 3
0318	1.20	.15		04276 3
0070	1.50	.20		04277 3
0168	1.15	.15		04278 3
0173		.25		

Fig. 8—Sample of tape printed when transactions are made. Columns, left to right, are: Destination station, inclusive rate, tax, pool portion, transaction number, and seller's number. Between the last two columns is printed, vertically, "C.P.I.," the machine number, while the "M" and "V" next to the tax column indicate a special portion for Maine and Vermont

TOTALIZER CARD

REMARKS

SELLER | NO.

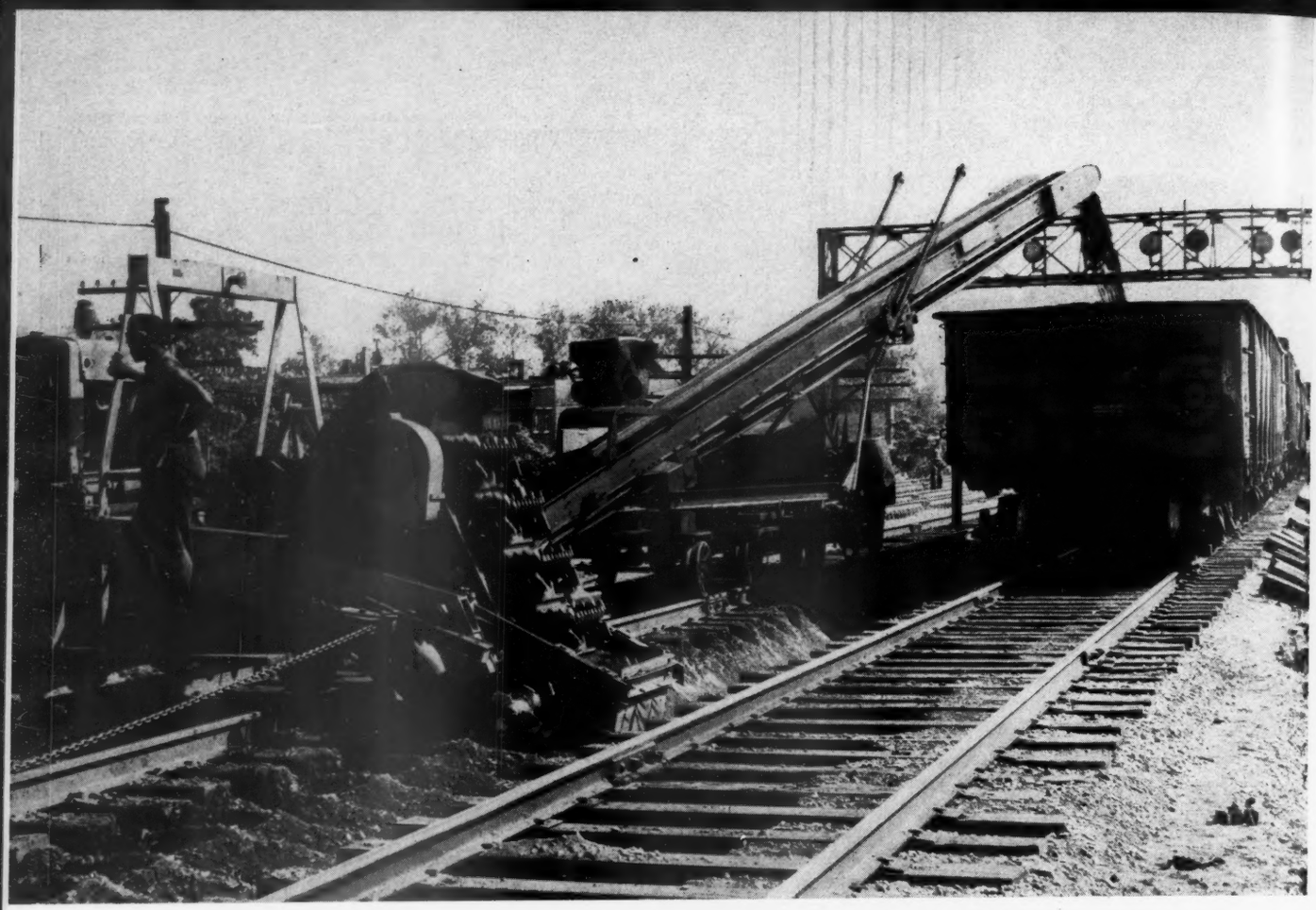
CASH $ | DATE | TIME FROM M TO M

MACHINE READINGS

	MACH. NO.	FARE & TAX	TAX	POOL	TICKET No.
Closing					
LESS: Opening					
Machine Gross					
LESS: Void					
Machine Net					

PRINTED IN U. S. A. FORM TC-CPI 2M - 3-48

Fig. 7—Totalizer card



The old ballast was excavated by the Ballastex and loaded by conveyors into gondola cars. (Part of the work train was cut out to facilitate taking the photograph)

SPECIAL EQUIPMENT SPEEDS BALLAST REMOVAL

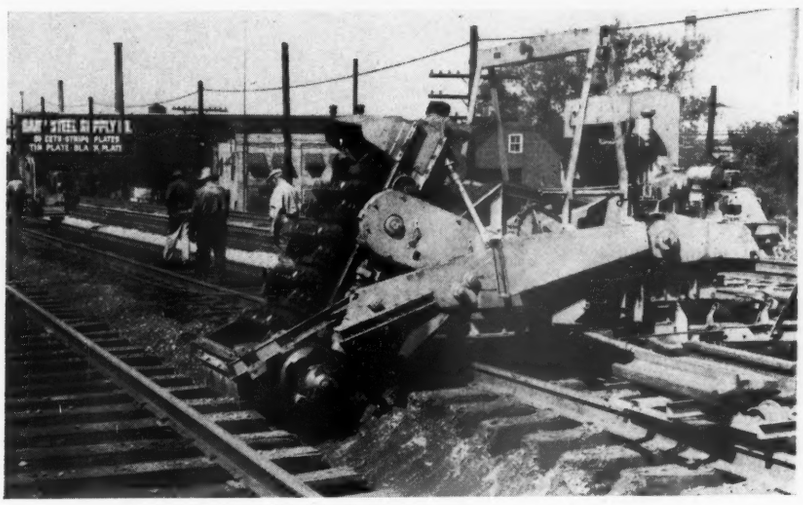
Reballasting project on the Burlington is expedited by the use of machines to excavate the old material and load it into cars for shipment to disposal points

When the Chicago, Burlington & Quincy recently decided to strip all of the fouled pit-run gravel from a seven-mile stretch of its multiple-track main line, wholly within the Chicago yard limits, and replace it with blast furnace slag, it was confronted with a major problem because the right-of-way is elevated and, for the most part, severely restricted in width, which made it impossible to waste the old ballast along the track. The huge quantity of old ballast therefore had to be loaded into cars for shipment to more suitable disposal points.

A highly satisfactory solution to the problem was found in the use of two power belt conveyors arranged so as to receive the old material from a ballast-excavating machine and discharge it into gondola cars in a work train on an adjacent track. The ballast excavator was a relatively new machine, known as the Ballastex — built by the Nordberg Manufacturing Company, Milwaukee, Wis. This combination of equipment loaded an average of seven 65-ton cars of old ballast during each working day, representing as much as ¾ mi. of travel for the equipment. On some days as many as 15 cars were loaded, the fastest loading time being 12 min. per car.

The track involved in this project extends from Mile Post 2, near Halsted Street station, Chicago, to Mile Post 9, near La Vergne station, Berwyn, Ill. Between these points are stretches of three and four main tracks, with running tracks and industrial sidings di-

The ballast was removed from the cribs to the shoulder or the inter-track space by a battery of four machines



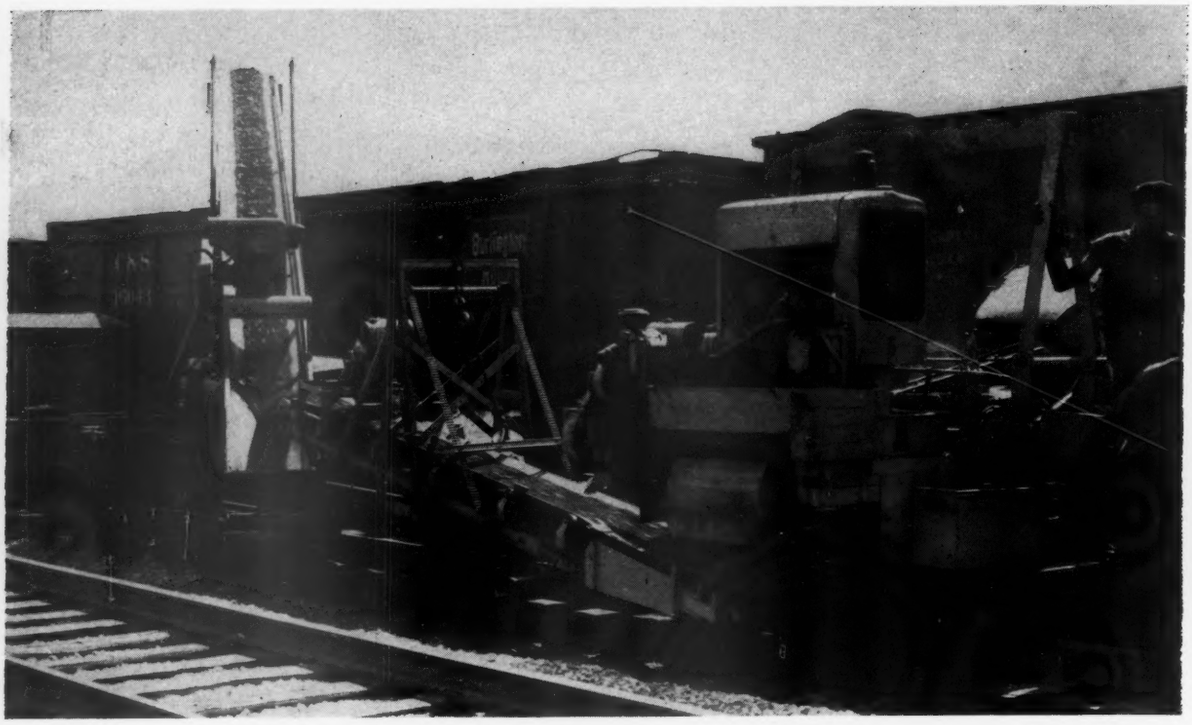
The Ballastex making its second pass to excavate material deposited in the inter-track space by the Cribex machines

rectly adjacent. Traffic is heavy and includes 71 suburban trains, 32 regular through passenger trains and numerous freight-delivery and interchange runs daily.

Strip Cribs with Cribex Machines

The last general reballasting at this location was performed about 20 years ago, and during the intervening period the ballast had become badly fouled. For removing the old ballast from between the ties, the road leased four Nordberg Cribex machines from the manufacturer. This machine is a track-mounted unit, which rakes the ballast from the cribs into the inter-track space or onto the ballast shoulder. This operation is accomplished by a digging boom which mounts an endless chain with a series of digging flights. The boom passes under the rail and penetrates the crib to the center of the track, while the flights carry the crib ballast to the side of the track. By using the machines to strip one-half of the track first, then turning them to strip the other half, the entire track may be cleaned. Each machine is operated by an operator and one helper, who move it from tie to tie manually.

The Ballastex is also a track-mounted unit, the function of which is to excavate the ballast from the inter-track space or shoulder for disposal or cleaning. The machine has a downward-projecting, hydraulically-operated, double-arm boom on one side, on which two cone-



shaped cutting and collecting drums are mounted horizontally at the outer end in such a way that they can operate in the ballast section along the side of the track.

The boom may be raised and lowered with respect to the track, and the cones are mounted so that one is in advance of the boom and the other is behind it. An endless-chain mechanism, with a series of digging buckets attached, is located between the arms of the boom so the buckets enter the shoulder or inter-track ballast between the cones.

Movement of the machine is accomplished with a length of chain attached to a track rail ahead of the unit by a wedged clamp. The free end of the chain is passed over a pulley on the machine, driven by a hydraulic motor. The speed of the machine in use is 600 ft. to 900 ft. per hour, depending on the depth of cut.

The Ballastex is arranged for use in either direction along the track, for which purpose the two digging cones are provided. An operator and two helpers are assigned to the machine.

When in operation, the boom is lowered until the digging mechanism rests on the surface of the ballast. This mechanism is then set in motion and settles, by its own weight, to the depth of excavation desired. As the machine moves ahead, the forward drum loosens the ballast, which is then picked up by the buckets on the endless-chain and deposited within the machine on a lateral endless-belt conveyor. The conveyor may be adjusted to dispose of the excavated material up to seven feet from the ends of the ties on the opposite side of the track from the digging mechanism. However, because of the restrictive conditions in the territory involved, the Burlington operated the Ballastex with this conveyor fully retracted, so that it discharged on the receiving end of the first of two conveyors that were used to load the material into cars

Belt-Type Loading Conveyors

The first of these loading conveyors was a 20-ft. unit that had been designed by Nordberg for use with the Ballastex. Mounted on a special four-wheel dolly car, which was coupled close to the Ballastex, this unit received the dirty ballast from the internal conveyor on the Ballastex and carried it to the rear to deposit it on the second conveyor — a 35-ft. Barber-Greene Model 363 stockpiler loader — which performed the actual loading into a high-side gondola car on an adjacent track. All units of the equipment were pulled along the same track by the propelling mechanism of the Ballastex. One operator was assigned to handle the two conveyors, each of which had its own power plant.

Made Two Passes

Two passes of the Ballastex and conveyors were required through each intertrack or shoulder space involved. On the first pass the Ballastex excavated the existing ballast to a depth of 19 in. below the tops of the ties, cutting a trench 42 in. wide at the top, while the conveyors loaded the old material. The four Cribex units followed directly behind, removing the crib ballast from half of one track and depositing it in the trough left by the Ballastex. The Cribex machines

Facing page—With this arrangement of the Ballastex and conveyors, the old ballast was delivered to gondola cars on an adjacent track

Right—After new ballast had been applied and the track raised it was tamped by this Jackson Multiple Tamper

then made a pass along the adjacent track, cleaning out the half-cribs of that track adjacent to the trough. The second pass of the Ballastex and conveyors removed all the crib material from the inter-track space or shoulder and loaded it.

A work train, made up entirely of high-side gondolas, was operated daily in conjunction with the Ballastex. At the start of each day's work the train was spotted so that the long conveyor discharged into the advance end of the end car in the train. The train remained standing while the machines moved ahead the length of the car. The train was then moved ahead one car length so that the conveyor again discharged into the advance end of the car. This process was repeated until the end car was fully loaded, after which the next car in the train was loaded in the same manner.

The arrangement of equipment described fouled only two tracks — the track on which the excavating and conveying equipment was operated and the track used by the work train. Movement of trains on other adjacent tracks was not interrupted, but they were notified by order to reduce speed to 20 m.p.h. while passing the work.

Other Phases of the Work

As the track was being skeletonized by the cribbing and excavating machines, a tie-renewal force of 45 men moved in to carry out their phase of the work. Aided by the absence of crib, inter-track and shoulder ballast, this force moved rapidly. As soon as tie renewals were completed, new crushed-slag ballast was unloaded in preparation for track raising.

The track was raised an average of three inches, as indicated by grade stakes, a Nordberg hydraulic power jack being used to make the raise. The raising force included 45 men organized into several small gangs, some fork-tamping the ties at the points raised by the power jacks, others throwing in ballast to fill the cribs, and still others leveling ballast, lining the tracks and performing other finishing-up work.

Tamping was performed by a Jackson Multiple Tamper. This unit is a track-mounted machine with 12 electric vibratory tampers arranged on a crosshead which is raised and lowered hydraulically. When lowered into the ballast they tamp both sides of a tie simultaneously, including the ballast under the rails. Production of this unit was high and averaged 500 ft. per hour when operating.

Because suburban traffic on this line is heavy, and there are a number of through trains with morning arrivals, the track forces were unable to use the track until 10 a.m. Similarly, the afternoon rush required them to release the track by 4 p.m. Thus, a maximum of only six hours working time was available, including the lunch period, but during this time the track forces had exclusive use of the necessary tracks.

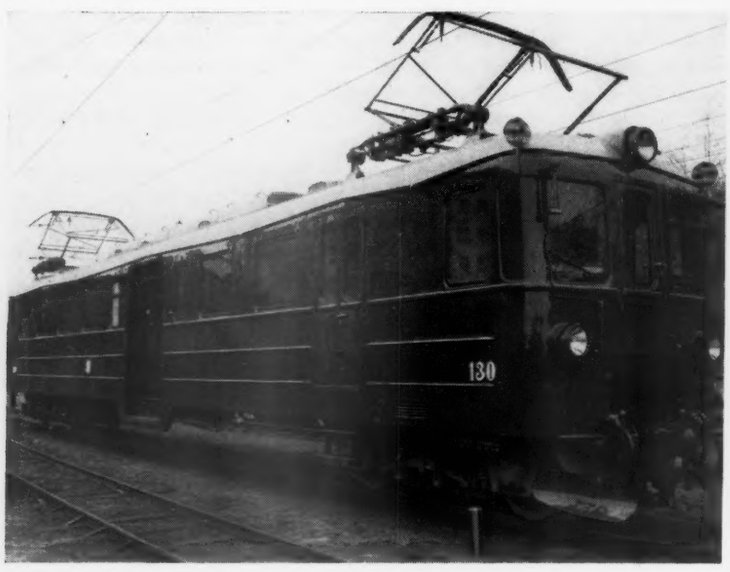
This project and the development of the special equipment employed were carried out under the general direction of H. R. Clarke, chief engineer of the Burlington Lines, and E. J. Brown, engineer of track, Chicago. S. E. Tracy, superintendent of work equipment, Chicago, collaborated with engineers of the Nordberg Manufacturing Company in adapting the equipment for use on the project. R. P. Johns, roadmaster, Chicago, was in direct charge of the work.

Circular timetables (above) that can be revolved take little space in the station waiting room at Kalmar

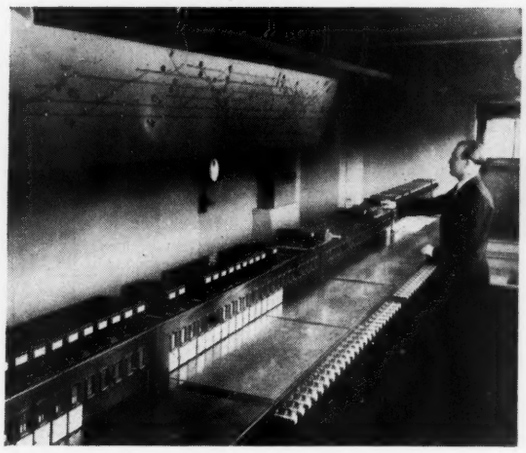
Below—A section of the office in Stockholm that handles approximately 2,000 requests daily for space in sleeping cars

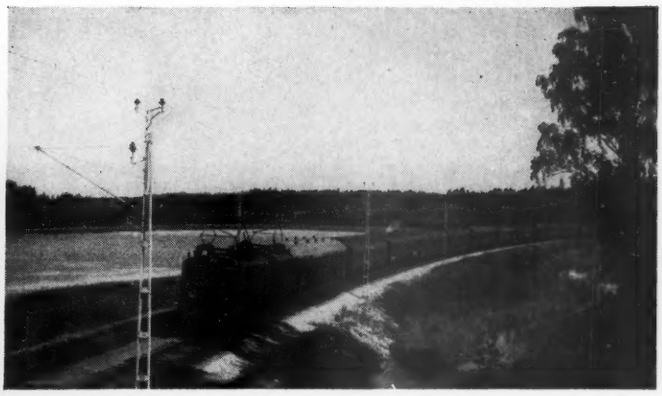
A GLIMPSE AT THE SWEDISH STATE RAILWAYS

Left—Electrically-driven cars operating between Stockholm and Rimbo accommodate 52 passengers. There is one section for smokers, one for non-smokers and another for baggage. Right—A 600-ft. rose bed grows along the platform at Mjolby. Each station along the line is brightened by flower beds, shrubs and trees



Below—The electrified interlocking installation at Hallsberg

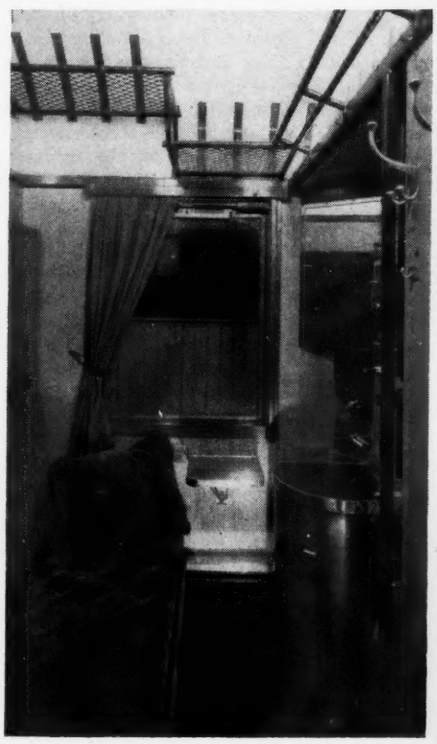


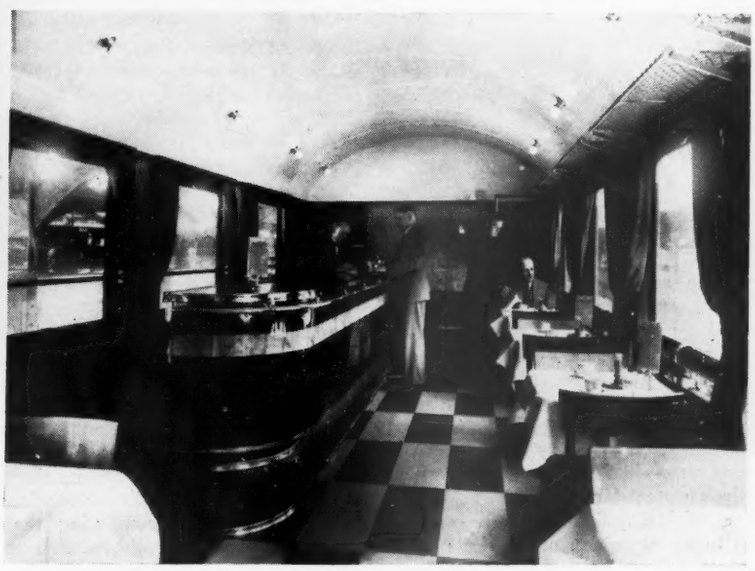


Above—Approximately 3,000 miles of the Swedish state railways are electrified, handling 80 per cent of all traffic

Below—Interior of a rail bus

Below—Compartment in the most modern third-class sleeping car





Right—A buffet car

Photos—American-Swedish News Exchange

GENERAL NEWS

Must "Labor Together" to Avoid Government Ownership

Railroads and shippers have joint concern, Smith tells N. W. board

"It might prove helpful if every railroad man would realize more sincerely that he is a public relations man—it is the way in which his work is done that makes or mars the relations with the public, whose understanding of transportation agencies, and whose feelings about them determine finally the public policies under which the transportation agencies may live and prosper, or may wither and die, as free enterprise," Earl B. Smith, of Minneapolis, Minn., director of traffic of General Mills, Inc., told the Pacific Northwest Shippers Advisory Board at Portland, Ore., on March 25.

"Users of railroad transportation," Mr. Smith stated, "are not at all happy about the ridiculous and troublesome condition into which the freight tariffs have been allowed to drift—and to remain; nor are they impressed with the recent noticeable falling off in the orders for new railroad equipment and supplies; or the fact the railroads are curtailing activities at equipment repair shops."

On the other hand, the speaker warned, industrial traffic managers must broaden their own outlook, and "top managements of the users of transportation must show a greater concern and willingness to labor together with all other factions in the solution of our transportation problem." In support of this statement, he pointed out that "the railroads, as our major agency of transportation, may collapse; they may go under government ownership, carrying with them—as they would—all other agencies of transportation, with perhaps substantial losses to the security and equity holders, but, so far as they are concerned, when that phase has passed, they are through."

Would Change Relationships

But, he added, "the user of transportation would have to live on in a changed relationship, where control has gone out of his hands into those of instrumentalities that exercise the power of life and death over his enterprise and over his entire investment—a continuous, never-ending, day-to-day relationship with powers that could easily become wholly dictatorial."

Most of Mr. Smith's address was devoted to an exposition of the facts that transportation as a whole, being "absolutely essential to our public welfare and national economy, must be preserved in healthy and efficient condition as a private enterprise"; but that "our railroads, the basic agency for the great bulk of mass transportation—and the bulwark of private enterprise in transportation, are in an exceedingly shaky position—especially in the matter of attracting private capital."

This condition Mr. Smith ascribed in part to the fact that "far too many of us" take our transportation "far too much for granted"; in part to the fact that railroad wages, taxes and material costs have risen much more rapidly than railroad rates; and in part to the fact that "we have pursued a national policy which has divided the available traffic of the country among the different carriers or agencies—with many of them constantly on the brink of bankruptcy."

"They are all," he added, "in competition for the available traffic, and together they have created, and continue to create, through their independent and uncorrelated development a surplus of transportation facilities that cannot long be sustained under either normal or peak traffic volume.

Present Regulation Promotes Waste

"Present regulation promotes waste of capital expenditures in the transportation system—both government and private. It promotes duplication in facilities, in overheads and services . . . There has been no leadership for transportation, as a whole . . . There has been a definite lack of constructive cooperation between the transportation agencies and the users of transportation."

"Throughout the world," he warned, "government ownership of transport has become the cornerstone of the socialistic state. It can come about . . . through outmoded national policies and conflicting and cumbersome regulation which promote economic dislocations, waste, and pyramided costs—with a resultant insufficiency finally of private capital to support such a vast enterprise.

"Such is the road we travel in this country. If we continue as we have been going, the destination seems surely to be government ownership—and if that becomes the only recourse in the case of any one transportation agency, it will mean government ownership for all . . . We must labor together . . . for continued private ownership and operation of our great transportation system."

He mentioned the "Economic-Statutory Project" of the Transportation Association of America as offering "the only approach toward a solid solution of our transportation problem," and urged increased support for the project by transportation agencies and users.

The board estimated an increase of 6.4 per cent in car loadings in its territory during the second quarter of 1949 as compared with the same period in 1948, but pointed out that the second 1948 quarter was in some respects "subnormal." The board adopted resolutions opposing creation of a federal department of transportation, favoring establishment of a federal traffic bureau, and approving legalization of "other than f. o. b. mill pricing methods." Present board officers were re-elected.

Resources Board Forms Railroad Study Group

President Buford of Milwaukee is chairman of "task force"

Director Granville Conway of the National Security Resources Board's Office of Transport and Storage announced on April 4 the formation of his office's Task Group for Railroad Transport, which will "study the problems of railroad transport and advise concerning mobilization plans in the event of war." The railroad "task force," headed by President Charles H. Buford of the Chicago, Milwaukee, St. Paul & Pacific, is one of five study groups in the transport and storage fields which are parts of Director Conway's advisory organization. Their work will be coordinated through a general committee headed by Director J. Monroe Johnson of the Office of Defense Transportation.

C. R. Megee, vice-chairman of the Car Service Division, Association of American Railroads, is secretary of the railroad group and its other members were listed in Director Conway's April 4 announcement as follows:

EASTERN DISTRICT

W. C. Baker, vice-president, Baltimore & Ohio.
E. J. Stubbs, superintendent of transportation, Erie.
F. A. Dawson, vice-president, New York Central.
H. F. McCarthy, vice-president—traffic, New York, New Haven & Hartford.
A. F. McIntyre, chief of freight transportation, Pennsylvania.
R. H. Clare, general passenger agent, Pennsylvania.

SOUTHERN DISTRICT

R. C. Parsons, general manager, Louisville & Nashville.
R. K. McClain, assistant vice-president, Southern.
F. C. Toal, general industrial agent, Southern.

WESTERN DISTRICT

F. E. Sperry, general superintendent of transportation, Chicago, Burlington & Quincy.
C. W. Pace, general superintendent of transportation, Missouri Pacific.

R. E. Mattson, general superintendent of transportation, Northern Pacific.
J. W. Corbett, vice-president, Southern Pacific.
P. J. Lynch, vice-president, Union Pacific.

SHORT LINES AND OTHER CARRIERS

J. M. Hood, president, American Short Line Railroad Association.
G. A. Kelly, vice-president, Pullman Company.
E. A. Berry, general manager, Railway Express Agency.

INDUSTRIAL ADVISERS

P. A. Hollar, vice-president, American Car & Foundry Co.
Porter L. Howard, general traffic manager, Sun Oil Company.
J. B. Keeler, manager, Traffic and Transportation Department, Koppers Company.
F. A. Theis, president, Simonds, Shields, Theis Grain Company.
A. H. Schwietert, president, National Industrial Traffic League.
George H. Shafer, general traffic manager, Weyerhaeuser Sales Company.
W. B. Shepherd, president, National Association of Shippers Advisory Boards.

GOVERNMENT-AGENCY REPRESENTATIVES

Brigadier General Paul F. Yount, assistant chief of transportation, U. S. Army.
Brigadier General William E. Farthing, chief, Transportation Division, U. S. Air Force.
Captain C. B. Kitchen, Bureau of Supplies and Accounts, U. S. Navy.
Homer C. King, director, Bureau of Service, Interstate Commerce Commission.
George H. Cheely, chief, Shipping Division, Production and Marketing Administration, Department of Agriculture.
Joseph J. Gallagher, assistant chief, coal economics, Department of Interior.
J. F. Perrin, Manpower and Utilities Division, Munitions Board.
Paul M. Zeis, chief, Transportation Division, Department of Commerce.
William E. Hayghe, chief, Central Traffic Service Division, Federal Bureau of Supply.
Nair G. Maxson, general superintendent, Third District, Railway Mail Service, Post Office Department.

Also included in Director Conway's announcement was a statement by Mr. Buford who said: "Our task group is appraising the ability of the nation's rail transportation system to absorb increased demands if necessary. We are studying carefully the experience of World War II and are determined to profit from the lessons of that period. It is the fervent hope of all our task group members that our country will never be called upon to put into operation the plans we are developing, but we realize fully the necessity for making those plans as perfect as possible."

The announcement further revealed that seven sub-committees of the group are already engaged on various studies which include inquiries into the following: (1) The adequacy and suitability for possible future use of orders issued by O.D.T. and other government agencies during World War II (and early post-war years), affecting railroad freight and passenger operations; (2) the current situation in the railroad industry with special reference to the present condition and supply of facilities, equipment and materials, and also the effects upon the railroad industry of probable wartime demand for transportation, both civilian and military; (3) the minimum annual requirements of the railroads for manpower, equipment, etc., in the event of war; and (4) suggestions for the type of organization to administer temporary wartime control of the railroads, including the availability of personnel from the railroad industry to fill key positions in such an organization should the need arise.

The other four "task groups" which Director Conway is organizing will deal with street and highway transport, inland water transport, pipe lines, and warehousing and storage. (See *Railway Age* of January 29, page 38.)

Court Sees Little Precedent in N. R. A. B. Award

District judge decides in railroad s favor in air-hose coupling case

A previous award of the National Railroad Adjustment Board does not necessarily constitute precedent in the settlement of a subsequent dispute, especially when to interpret it in such manner would constitute violation of an individual carrier contract. This was the opinion expressed by Judge Wallace S. Gourley of the federal district court for the western district of Pennsylvania, in entering judgment in favor of the Pittsburgh & Lake Erie in the case of a group of trainmen claiming additional day's pay for coupling air hose in yards where carmen were "available." The case was described at some length in *Railway Age* for March 26, page 92.

The court ruled in favor of the carrier because it found that the governing labor contracts do not specifically provide for an additional day's pay penalty for violations. It did find, however, that seven of the 133 plaintiffs should receive specific punitive payments because their grievances fell under the provisions of a compromise agreement worked out between the management and the union in 1943 to dispose of claims then outstanding.

All of the trainmen had claimed that they were entitled to an additional day's pay for each infraction of the air-hose coupling rule—even though such punitive payment is not specifically required by the working rules. In denying their claim, the court concluded that the P.&L.E.—in negotiating the working agreement that governed—had not intended that an additional day's pay would be the measure of compensating trainmen in instances of contract violations.

Hints N.R.A.B. Procedure Inadequate

The trainmen placed much weight on the precedent which they claimed had been set by a 1943 award of the National Railroad Adjustment Board [Award No. 8258, Docket No. 14903, decided by Referee Robert G. Simmons] sustaining the claim of two P.&L.E. trainmen for additional day's pay for violation of the road's air hose coupling rule. The fact that the road paid the award, the plaintiffs contended, was an admission of the carrier's liability to all trainmen in similar cases. In the opinion of the court, "great weight should not be given" to the findings of the First Division of the National Railroad Adjustment Board in the instant case. The opinion of the court reads, in this connection: "None of the parties [before the N.R.A.B.] was represented by legal counsel, no witnesses were called, no testimony was given under oath, no briefs were filed, there was no interrogation by any of the board members, no stenographic notes were taken and the parties were limited to the positions set forth in their [original] submissions."

Further, the court said, "In sustaining the claim, the referee did not discuss or make reference in detail to the facts upon which the award was premised. It seems to be the practice of the board that the sustaining of a claim means the position of the employees has been found correct." An award of the adjustment board which would sustain the employees' claim in this case, Judge Gourley said, "would amount to a change in the contract and, in my opinion, exceeds the board's interpretive authority."

A similar suit of trainmen on the Illinois Central has been submitted to the federal district court at Chicago (see *Railway Age* for September 11, 1948, page 80). The case has been heard, but, to date, no judgment has been handed down.

2 Months Net Income Totaled $17,000,000

Net railway operating income for the same period was $62,998,694

Class I railroads in the first two months of this year had an estimated net income, after interest and rentals, of $17,000,000, as compared with $37,000,000 in the corresponding period of 1948, according to the Bureau of Railway Economics of the Association of American Railroads. The two-months' net railway operating income, before interest and rentals, was $62,998,694, as compared with $81,071,749.

Estimated results for February showed a net income of $5,000,000, as compared with $19,000,000 for February, 1948, while the net railway operating income for the 1949 month was $29,754,215, as compared with $39,425,295 for February, 1948. In the 12 months ended with February, the rate of return averaged 4.3 per cent, as compared with 3.32 per cent for the 12 months ended with February, 1948.

Gross in the two months amounted to $1,406,435,652 compared with $1,466,625,429 in the same period of 1948, a decrease of 4.1 per cent. Operating expenses amounted to $1,184,046,785 compared with $1,202,211,199, a decrease of 1.5 per cent. Forty-three Class I roads failed to earn interest and rentals in the two months, of which 15 were in the Eastern district, 4 in the Southern region and 24 in the Western district.

Class I roads in the Eastern district in the two months had an estimated net income of $20,000,000 compared with

a net income of $6,000,000 in the same period of 1948. For February their estimated net income, was $8,000,000 compared with $5,000,000 in February, 1948.

Those same roads in the two months had a net railway operating income of $46,529,002 compared with $25,330,408 in the same period of 1948. Their net railway operating income in February amounted to $21,550,375 compared with $13,074,342 in February, 1948.

Gross in the Eastern district in the two months totaled $667,573,929, a decrease of 0.8 per cent compared with the same period of 1948, while operating expenses totaled $546,232,157, a decrease of 4.1 per cent.

Results in the South

Class I roads in the Southern region in the two months had an estimated net income of $11,000,000 compared with a net income of $13,000,000 in the same period of 1948. For February they had an estimated net income of $5,000,000 compared with $6,000,000 in February, 1948.

Those same roads in the two months had a net railway operating income of $18,238,007 compared with $21,162,835 in the same period of 1948. Their net railway operating income in February amounted to $8,851,992 compared with $10,595,136 in February, 1948.

Gross in the Southern region in the two months totaled $206,053,038, a decrease of 5.1 per cent compared with the same period of 1948, while operating expenses totaled $165,289,625, a decrease of 2.7 per cent.

Western Roads Hard Hit

Class I railroads in the Western district in the two months had an estimated deficit of $14,000,000 compared with a net income of $18,000,000 in the same period of 1948. For February they had an estimated deficit of $8,000,000 compared with a net income of $8,000,000 in February, 1948.

Those same roads in the two months had a net railway operating deficit of $1,768,315 compared with a net railway operating income of $34,578,506 in the same period of 1948. Their net railway operating deficit in February amounted to $648,152 compared with a net railway operating income of $15,755,817 in February, 1948.

Gross in the Western district in the two months totaled $532,808,685, a decrease of 7.6 per cent compared with the same period of 1948, while operating expenses totaled $472,525,003, an increase of 2.1 per cent.

CLASS I RAILROADS — UNITED STATES

	1949	1948
Month of February		
Total operating revenues	$ 675,749,306	$ 715,890,641
Total operating expenses	567,777,768	586,355,682
Operating ratio—per cent	84.02	81.91
Taxes	65,466,386	77,254,849
Net railway operating income (Earnings before charges)	29,754,215	39,425,295
Net income, after charges (estimated)	5,000,000	19,000,000
Two Months Ended February 28, 1949		
Total operating revenues	$1,460,435,652	$1,466,625,429
Total operating expenses	1,184,046,785	1,202,211,199
Operating ratio—per cent	84.19	81.97
Taxes	133,095,464	155,910,001
Net railway operating income (Earnings before charges)	62,998,694	81,071,749
Net income, after charges (estimated)	17,000,000	37,000,000

Western Roads Defend Proposed Rate Pact

I.C.C. opens first hearing on a Bulwinkle-Act agreement

Hearings in connection with the Interstate Commerce Commission's consideration of the rate-procedures agreement proposed for commission approval by carrier members of the Western Traffic Association got under way in Washington, D. C., on April 6. They are being held before Commissioners Alldredge and Rogers and Examiner J. P. McGrath.

The proceeding is docketed as Section 5a Application No. 2, the proposed agreement having been filed under that section of the Interstate Commerce Act which was added last year by the Bulwinkle-Reed Act. The proposed agreement was filed with the commission last November (see *Railway Age* of November 27, 1948, page 42); and recently a supplement was filed to make various corrections and modifications which were not of a substantative nature.

In addition to those of the interested railroads, appearances were entered at the hearing by several interveners, including the Department of Justice, which is opposing commission approval of the agreement, and the American Short Line Railroad Association and the National Industrial Traffic League which are supporting interveners. The N.I.T. League's petition for leave to intervene did say, however, that the League would consider the present proceeding a "test case" on Bulwinkle-Act agreements, and would present in it "such facts and argument as may be appropriate to the consideration by the commission of the general requirements, safeguards and formalities which should be observed in agreements among carriers."

The first railroad witness in support of the agreement was L. R. Capron, vice-president of the Chicago, Burlington & Quincy, who presented a comprehensive statement explaining the agreement and stressing his view that "there is no other practical way to deal with rate problems than the rate conference process." In preparing the agreement, Mr. Capron explained, the carriers "endeavored to preserve, as nearly as might be," the existing rate organizations in western territory and to "codify their procedures." He said that the organization and practices of the association and its constituent bureaus "have been established as experience and practical needs have dictated."

The agreement, however, does make some changes in the present set-up, Mr. Capron said, adding that some of those changes "are to afford greater safeguards to the shipping public." In that connection he cited provisions stipulating that all notices of rate proposals will be advertised in traffic publications, a practice which some of the bureaus have not followed in the past.

Of the general position of a shipper under the rate-conference plan, Mr. Capron said later that "in no other industry is the customer given such a significant part in the pricing of the commodity sold as in the transportation business." He described the rate conference as "primarily a method of bringing all facts out into the open, putting them on the table and disclosing the purposes to all parties." And he was convinced, he said, that there are few practices in the business world on which there is such complete unanimity as there is in the approval of the rate conference method of rate making by the shipping public.

"Shippers, like the railroads themselves," Mr. Capron continued, "want the facts concerning proposed rate changes so that they can be guided by the facts and not act on a lack of knowledge or through misunderstanding. They want to know what their competitors are after and what they themselves should have to meet any proposed changes. Shippers have found that the rate conference is a forum in which they argue out the issues. Rate litigation before the Interstate Commerce Commission is necessarily expensive for all concerned. The shippers know that hundreds of controversial matters are ironed out in the rate conferences each year which otherwise would go to the commission.

"The rate conference relieves shippers of what would be an insupportable burden if they had to deal with each of the railroads involved in a rate change separately and individually. It is greatly to the advantage of the shippers to deal at one time and at one place with all of the lines involved in a particular adjustment, and they are keenly mindful of that advantage."

As to competition between railroads, Mr. Capron is of the opinion that it is intensified by the conference method of rate initiation. There was much evidence of this in the over-all action of rate conferences, he said, adding that "as a practical matter the rate conference might in actuality, and on the basis of results, be described as the railroads' rate-reducing machinery." In an "overwhelming majority of the instances," Mr. Capron continued, rate changes made through the conference method are reductions.

He went on to say that it is only the conference method which permits "order rather than chaos" to prevail in the "intricate, complex and delicate mechanism" that is the railway rate structure. The proposed agreement in no way curtails the rights of shippers under the Interstate Commerce Act, Mr. Capron said in closing. He was there commenting on the Department of Justice's charge that the agreement, along with the other proposed territorial pacts, would permit the railroad industry to set up its own "private government." If shippers are not satisfied with the carriers' action, he explained, "they always can, and sometimes do," appeal to the commission for adjudication.

Railroad witnesses scheduled to follow Mr. Capron included E. W. Soergel, vice-president, Chicago, Milwaukee, St. Paul & Pacific; C. G. Hayes, vice-president, Texas & Pacific; C. E. Peterson, vice-president, Southern Pacific; Harvey M. Johnson, executive assistant to the trustee and to the chief executive officer, Missouri Pacific; H. W. Klein, freight traffic manager in charge of rates and divisions, S. P.; C. C. Beach, assistant freight traffic manager, Union Pacific; and E. B. Padrick, chairman, Transcontinental Passenger Association. The hearing schedule also calls for other sessions at Dallas, Tex., beginning April 19.

Public Apathy "Bankrupting" Transportation—Whittemore

Railroads need freedom to meet changing conditions

Public apathy is resulting in destruction of the nation's highways and, coupled with industrial shortsightedness and truck operator acquisitiveness, is bankrupting the country's transportation system, Laurence F. Whittemore, president of the New York, New Haven & Hartford, told members of the Traffic Club of the Providence, R. I., Chamber of Commerce at their annual dinner on April 4.

Mr. Whittemore warned that with American railroads "at the cross-roads," American industry is in the same position, although large segments of industry do not appear to realize that fact. "Under present conditions," he continued, "the railroad plant, improved as it is, is being liquidated through shortsighted government policy, shortsighted industrial policy and, I am sorry to say, in some respects through shortsighted railroad management and labor policy.

"The aspects of railroad monopoly on which public regulation and public thinking were founded have completely disappeared. This fact will not be disputed by any person close to the picture, but our habits and the regulations under which we operate as well as the methods customarily pursued have not been reorganized along realistic lines to meet the current situation.

"The lusty competitors of the railroad industry are not regulated on the same theory that railroads are regulated. Furthermore they cannot assume the whole burden of national transportation. They each have their aspects of advantage and occupy a necessary and proper place, which is in that sphere of activity in which they are the most efficient when paying their full costs of operation. As such they should be encouraged and not discouraged. They will not profit in the long run if encouraged to endeavors beyond their proper sphere by subsidization and the seeming advantage of freedom from proper regulation.

"Entirely aside from the fortunes of the railroad industry, it is increasingly obvious that present industrial shortsightedness, truck operator acquisitiveness and public apathy is bankrupting the transportation industry. We are pursuing the shortsighted policy of exhausting our highway system and wearing it out at a rate which even the present high national income cannot replace. This is brought about by the overloading of trucks, especially contract and private trucks. My authority for the foregoing statement is Thomas H. MacDonald, commissioner of public roads.

"The situation regarding air transport is another sample. Admittedly, air transportation should be encouraged because of its importance in national defense. However, the public in building air terminals without charging adequately for their use is building up in that industry a dependence on subsidy which will make the industry a slave to government, and a permanent dependent on the public treasury. There is no such thing today as free enterprise in air transportation, not because the regulatory laws restrict such freedom but because air transportation is dependent for a large part of its income on subsidy from various public agencies.

Railroads Must Be Relieved of Obligations

"It is evident that the railroads must be relieved from the obligation to furnish local service for which they are no longer the most efficient medium. This applies to freight as well as passenger service. The railroads must be freed from the type of regulation and thinking which renders them unable to quickly change their pricing and service to meet changing conditions. Great values are being destroyed constantly by the slowness of the public in recognizing what every businessman and most public authorities know is taking place.

"We have many situations on the railroad, for instance, where public representatives insist upon continuation of passenger service which the public have virtually abandoned. The cost of continuation of these services is such a burden on the rest of the service which the public still needs and uses, that higher rates seem to be the only solution for management. The resistance to higher cost by industry, brought about by higher rates for transportation charges, can be self-defeating.

"On the other hand, generally railroad charges are lower today than they have been in other times when a dollar bought a great deal more."

B. of L. E., B. of L. F. & E. To Vote on Merger Plan

Joint committees of the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen & Enginemen have agreed on a proposed plan for a merger of the two unions, to end "jurisdictional strife." The merger, which has been under consideration since October, 1947, will be submitted in the near future to a membership referendum in both organizations.

The 86-year old B. of L. E. has approximately 80,000 members in the United States and Canada. The B. of L. F. & E., which is celebrating its 75th anniversary this year, has about 110,000 members; there is, however, some duplication. Each brotherhood has property and assets with an estimated value of about $3 million, and the two together have in force insurance totaling about $125 million.

If the joint membership referendum approves the merger organizational details will be worked out at a subsequent constitutional convention. The combined union thus created would be known as the Brotherhood of Locomotive Engineers and Firemen.

Train Dispatchers and Red Caps Get Seven Cents and 40-hr. Week

The carriers represented by the three regional Carrier Conference Committees and the American Train Dispatchers Association reached an agreement on March 25 providing for a wage increase of $16.80 a month, retroactive to October 1, 1948, and establishing a five-day week effective September 1, 1949. The dispatcher's demands were first served on the individual railroads in July, 1948, and closely paralleled demands previously served by the so-called "sixteen cooperating railway labor organizations." The settlement is patterned after the recent settlement with the non-operating employees, outlined in *Railway Age* for March 26, page 86.

Agreement between the United Transport Service Employees, representing red caps and station porters on 16 eastern railroads and terminal companies, was signed on March 22, providing these employees with a 7-cent hourly wage increase, retroactive to October 1, 1948, and establishing a 40-hr. week effective September 1.

Students from 13 Railroads Complete Course at A.U.

Thirty-four employees of 13 railroads were among the 39 members of a class which completed on March 31 the

The class of the American University's Fourth Annual Rail Transportation Institute with Professor Homberger, the director (front row center)

month's course of the Fourth Annual Rail Transportation Institute conducted by the American University, Washington, D. C., under the direction of Dr. L. M. Homberger. The institute closed with a dinner at the Army and Navy Club in Washington, where certificates were awarded to members of the class by the university's president, Dr. Paul F. Douglass.

The dinner program also included addresses by Colonel J. Monroe Johnson, director of the Office of Defense Transportation, and by a member of the class —Lieutenant Colonel Harold C. Rowe, chief, Troops and Services Branch, Railway Transport Service Division, Office of Chief of Transportation, U. S. Army. Other members of the class were:

W. R. Allen, Memphis, Tenn., terminal trainmaster, St. Louis-San Francisco; Richard P. Bartlett, Cumberland, Md., trainmaster, Baltimore & Ohio; Charles Stevens Berry, Tulsa, Okla., general agent, Frisco; R. G. Bigelow, Marion, Ohio, inspector of operations, Erie; R. E. Blosser, Williamsport, Pa., assistant trainmaster, Pennsylvania; Henry J. Brehm, McKeesport, Pa., yardmaster, Union; Howard W. Burns, Chicago, traveling car agent, New York Central; H. Ward Bushacher, Denver, Colo., assistant accounting supervisor, Denver, Colo., assistant accounting supervisor, Denver & Rio Grande Western; Major Peter G. Canner, Arlington, Va., chief transportation officer, Military Air Transport Service; Elmer Cerin, Washington, D. C., executive assistant, War Assets Administration; Russell M. Descamp, Homestead, Pa., yardmaster, Union; David Albert Doyle, Gila Bend, Ariz., assistant trainmaster, Southern Pacific; J. T. Ehricht, Dallas, Tex., special accountant, Texas & Pacific; George R. French, Alexandria, La., division superintendent, T. & P.; P. H. Googe, Savannah, Ga., assistant superintendent of transportation, Savannah & Atlanta; R. C. Grayson, Birmingham, Ala., terminal trainmaster, Frisco; Alva William Hochberg, Akron, Ohio, terminal trainmaster, Akron, Canton & Youngstown; John C. Irvin, Jr., Iaeger, W. Va., assistant trainmaster, Norfolk & Western; Clarence E. Jackman, Connellsville, Pa., assistant division engineer, B. & O.

Also, William N. Kaylor, Baltimore, Md., cost study engineer, B. & O.; Edward Ray McGowin, Yonkers, N. Y., supervising safety agent, N. Y. C.; James Kelley McNeal, III, Altoona, Pa., junior engineer, P.R.R.; Richard L. Morris, Jackson, Mich., yard clerk, N. Y. C.; John P. O'Brien, Jr., Syracuse, N. Y., reservation clerk, N. Y. C.; Denis P. O'Dwyer, Brooklyn, N. Y., typist-biller and rate clerk, Erie; J. C. Page, Schenectady, N. Y., Transportation Division, General Electric Company; Edward J. Paronett, Ridgefield Park, N. J., city freight agent, N. Y. C.; J. M. Perkins, Jr., Frankfort, Ky., industrial agent, Frankfort & Cincinnati; J. J. Quinn, Altoona, Pa., assistant general foreman, car shop, P. R. R.; Hobart L. Scott, Roanoke, Va., chief clerk to vice-president and general manager, N. & W.; Kenneth W. Schoeneberg, Springfield, Mo., student apprentice, maintenance of way department, Frisco; Harold Edwin Shaughnessy, Hornell, N. Y., conductor, Erie; Chester A. Skoldberg, Bergenfield, N J., tugboat captain, N. Y. C.; Edward F. Tuck, Springfield, Mo., master mechanic, Frisco; Howard E. Tuttle, Roanoke, Va., divisions clerk, N. & W.; George E. Warfel, Tulsa, Okla., student apprentice, Frisco; George E. Wetterau, Akron, Ohio, student; Charles Wheatley, Jr., Roanoke, Va., clerk, N. & W.

Canadian Roads May Seek Additional Rate Increase

A possibility that Canadian railroads may seek another freight-rate increase after disposition of their current application for a 20 per cent raise was indicated to the Board of Transport Commissioners at Ottawa, Ont., last week by Hugh O'Donnell, senior counsel in the present case for the Canadian National, in closing that company's final argument in favor of the pending increase.

While Mr. O'Donnell did not definitely state that an additional increase would be sought, he pointed out to the board that the present 20 per cent increase would not meet greater costs incurred by the C. N. R., and that a "considerably higher" increase would be "quite justified" "on the merits of the evidence." The C. N. R.'s estimated operating revenue for 1949 is $520,900,000, against actual revenue of nearly $492 million in 1948. Operating expenses for 1949 are estimated at $494,300,000, as compared with actual expenses of $464,740,000 last year. The $30-million increase in expenses is attributable principally to wage increases made effective in 1948.

The Canadian National's 1949 budget provides for expenditures of approximately $54,700,000 for new equipment and additions and betterments. New equipment to be financed this year is estimated to cost $31,200,000, of which $22,500,000 will be covered by a proposed equipment trust issue, leaving $8,700,000 to be provided under the road's financing act. Additions and betterments in the Central region, chiefly Quebec and Ontario, will cost over $12,000,000. In the Atlantic region, chiefly the Maritime provinces, the cost will be nearly $2,500,000. More than $6,000,000 will be spent in western Canada and over $3,000,000 on the Grand Trunk Western.

Want Interim Mail-Pay Raise Increased from 25 to 60 Per Cent

The railroads have asked the Interstate Commerce Commission to raise, from 25 per cent to 60 per cent, their interim increase in rates for handling mail. The request was embodied in a motion filed in the mail-pay case (Docket No. 9200) on March 31, a week after the filing of a modified petition which raised, from 65 per cent to 80 per cent, the permanent mail-pay increase being sought in the proceeding (see *Railway Age* of April 2, page 52).

The advances would be applied to the rates in effect February 18, 1947, the day prior to that on which the carriers' original petition was filed. The present interim increase of 25 per cent was authorized by the commission in an order dated December 4, 1947; it was retroactive to February 19, 1947. The motion filed March 31 asked for retroactive application also of the additional 35 per cent interim advance which it seeks. It would make 20 per cent of the 35 per cent effective as of June 24, 1948, the date of the carriers' first supplemental petition which raised the proposed permanent increase from 45 per cent to 65 per cent; and it would make the remaining 15 per cent effective as of March 24, i.e., the date of the aforementioned petition raising the proposed permanent advance to 80 per cent.

Railroad arguments in support of the motion cited increases in costs which have occurred since the 25 per cent increase was authorized. The carriers asserted that these cost increases justify further interim relief in view of indications that the commission's decision on the permanent proposal may be delayed another two years. In the latter connection, the motion cited a statement to the effect that the Post Office Department did not expect to be ready to present evidence in the case until March-to-June, 1950. The statement was made before a subcommittee of the House committee on appropriations by Arne C. Wiprud, who is handling the proceeding in his present role of associate solicitor for the Post Office Department. Mr.

Wiprud was formerly a member of the Department of Justice's anti-trust staff.

The motion also cited that part of the commission's December 4, 1947, decision authorizing the 25 per cent interim increase which said that "it would not be fair or just to require the railroads to carry the mails under present terms and conditions at rates which we find upon this record are now unduly low, even though we cannot determine at this stage what the ultimate rates should be." The motion went on to suggest that the commission, "after hearing," should "bring up to date its order of December 4, 1947."

R.E.A. Seeking I.C.C. Findings To Remove Anti-Trust Case's Base

In a maneuver calculated to remove the basis for the Department of Justice's anti-trust complaint against it, the Railway Express Agency has asked the Interstate Commerce Commission to make a specific determination to the effect that the commission's approval of pooling arrangements for the handling of express traffic under the Express Operations Agreement have included approval of that agreement's so-called "exclusive provisions." The latter are the provisions which constitute R.E.A. as the exclusive agent for each contracting railroad in the conduct of express business, and under which each road agrees not to transport competing traffic on passenger, mail or express trains.

The commission first approved the pooling arrangements in 1929, when it authorized the railroads to acquire ownership and control of the Express Agency. A subsequent decision of 1938 also approved the arrangements as they were modified by R.E.A.'s acquisition of the business of the former Southeastern Express Company. These actions of the commission were pursuant to the Interstate Commerce Act's section 5 which provides that carriers participating in such approved arrangements shall be immune from prosecution under the anti-trust laws.

The R.E.A. petition said that the Justice Department's complaint (see *Railway Age*) of September 25, 1948, page 59) seemed to be directed against the operations agreement's "exclusive provisions" and the definition of "express transportation business" to be carried on under the agreement. "Because of certain language of limitation used in the commission's reports," the petition added, "the attorney general takes the position that these provisions . . . are not within the scope of the commission's approval and that the commission specifically refused to approve them."

Thus the petition asked that the commission issue a supplemental report making specific findings to the effect that the approved pooling arrangement "is a pooling of all revenues, expenses, traffic and service connected with the express transportation business of the contracting railroads as such business is defined in such agreement"; and that the agreement's "exclusive provisions" are "necessary to insure the economies of united operations and the fair and practicable operation of the pooling arrangement, all in the interest of better service to the public and of economy in operations and do not unduly restrain competition."

Arguing in support of this plea, the petition asserted that the express business, prior to the formation of R.E.A., "had always been conducted on the basis of such an exclusive position for the contracting express company or agency." It went on to say that the commission had the "power and the duty" to require the elimination of exclusive provisions from the R.E.A. set-up "if it believed them to be violative of the national transportation policy." Because it did not do so, it "may be presumed to have approved those provisions," the petition added.

It proceeded to suggest that the commission now has an "appropriate opportunity" to take the requested action in view of the fact that the cases in which the prior reports approving the pooling arrangements were made (Finance Dockets Nos. 7316 and 7322) have been reopened for further handling along with the pending investigation (No. 29679) of the Express Agency's present plan for apportionment of its revenues among the railroads. This investigation is an aftermath of the commission's Ex Parte 163 express-rate decision of October 29, 1946, the hearings in that case having revealed that the apportionment plan, not filed with the commission up to time of such hearings, had been adopted in 1938 as a modification of the plan originally installed with commission approval in 1929.

Hoover Commission Would Liquidate Federal Barge Lines

The Hoover Commission on Organization of the Executive Branch of the Government has recommended that the Inland Waterways Corporation, operator of the Federal Barge Lines, "be put into immediate liquidation." The recommendation was included in the commission's report on "Federal Business Enterprises," submitted to Congress on April 1.

Another recommendation of the report called for incorporation of the Alaska Railroad under the Government Corporation Control Act of 1945. This railroad is now supervised by the Division of Territories and Inland Possessions of the Department of the Interior.

Leading up to its recommendation that I.W.C. be liquidated, the report said the corporation's accumulated deficit "from operations and insufficient depreciation reserves" was $8,192,104 as of June 30, 1947. "The fleet," the report continued, "is obsolete and it is estimated that about $18 million would be required for rehabilitation. Private enterprise now serves this transportation purpose, as indicated by the fact that the company carried about 3 million tons of a total of about 40 million tons on the rivers it serves.

"The Under Secretary of Commerce, in a statement to the Appropriations Committee of the House, has given an uncertain outlook for the corporation. In 1947, the Committee on Small Business of the House of Representatives recommended that the government liquidate the business. The General Accounting Office has also recommended that the government withdraw from this business."

N.Y.C. to Inaugurate New Detroit-Cincinnati Train

The New York Central will inaugurate a new Detroit, Mich.-Cincinnati, Ohio train, the "Cincinnati Mercury," on April 24, when the system's summer timetable goes into effect. In both directions the train will be operated with full equipment of the Detroit-Chicago "Mercury," which is to be re-outfitted with new stainless steel cars. The new train will leave Detroit daily at 11:30 a.m. and arrive in Cincinnati at 6 p.m. It will depart from Cincinnati each day at 8:50 a.m. and reach Detroit at 3:40

$15,000 DAMAGE—$50 FINE

Down in Trenton, N. J., according to the Harrisburg, Pa., Evening News, there's a truck operator by the name of John Barbuto. Judging from some of his recent activities, John is a firm believer in "mass transportation"—and has no aversion to, as the boys say, "making a fast buck for himself."

At any rate, John had a chance not long ago to haul some structural steel from Pittsburgh to New York. So he took his little truck—registered for a gross weight of a mere 45,000 lb.—and loaded up the steel—132,000 lb. of it. Why worry, John probably reasoned, about a little thing like a triple overload; after all, most of his journey would be over Pennsylvania highways. And John doesn't own *them*—they just belong to the people of Pennsylvania who ought to be glad to shell out tax money to keep John in business.

He nearly got away with it, too—as far as Fogelsville, just 20 mi. from the New Jersey line. There he had the bad luck to run afoul of an unreasonable state trooper, and an equally unreasonable justice of the peace. They made him, the News says, reduce his load to legal limits and pay a maximum $50 fine and costs. But they accorded him the "proud" distinction of having carried the largest truck overload ever recorded in Pennsylvania.

Highway damage from John's little excursion? Just $15,000, according to police estimates. Apparently nobody dared guess how many "fast bucks" John made, over and above his fine, by his flagrant abuse of public property.

p.m. A second new train, the "Michigan," will leave Detroit at 1 p.m. and arrive at Chicago at 5:15 p.m., stopping at Ann Arbor, Mich., Jackson, Battle Creek, Kalamazoo, Niles, Woodlawn, Ill., and Central Station, Chicago. It will consist of streamlined coaches, a dining car and an observation-parlor car.

Emergency Board on S. P.

President Truman on March 30 issued an executive order creating an emergency board to investigate a dispute between the Southern Pacific and its Pacific-Lines firemen represented by the Brotherhood of Locomotive Firemen & Enginemen. The dispute involves approximately 100 grievance cases within the jurisdiction of the National Railroad Adjustment Board, and a controversy between the B. of L. F. & E. and the Brotherhood of Locomotive Engineers regarding the promotion date of engineers. A strike called for April 2 was postponed when the emergency board was created.

Money for Rivers and Harbors

Appropriations totaling $176,034,270 for the rivers and harbors work of the Army's Corps of Engineers are proposed in H. R. 3734, the Department of Army's civil functions appropriations bill for the fiscal year ending June 30, 1950, which was passed by the House of Representatives on March 29. This is a reduction of $55,118,350 below the $231,152,620 proposed by the Bureau of the Budget, but it is $9,045,170 more than the $166,989,100 appropriated thus far for the current fiscal year ending next June 30. In the latter connection, however, there is pending before the Senate a House-approved deficiency appropriation of an additional $10,500,000 for the current fiscal year.

In trimming the budget estimates for fiscal 1950 by more than $55,000,000, the House committee on appropriations explained in its report on the bill that it had made allowances for prospective carry-overs of unexpended balances from appropriations for the current fiscal year and for expected decreases in construction costs. The report went on to explain that the proposed appropriation of $176,000,000 would include approximately $85,000,000 for new construction, and $91,000,000 for maintenance and operation of completed works.

Meanwhile, the bill carries no fiscal 1950 appropriation to cover the federal government's share of the cost of altering railroad bridges over navigable streams. The Bureau of the Budget recommended $50,000 for this purpose, for which $500,000 was appropriated during the current fiscal year. The government's participation in the cost of the bridge alterations is pursuant to the so-called bridge act of 1940, which provided that the government must pay for the reconstruction of railroad bridges required to be rebuilt in connection with waterway projects—except such costs as result in benefits to the railroads involved.

During its consideration of the bill, the House rejected an amendment which would have had the effect of requiring $3,000,000 of the appropriation to be spent for the beginning of work on the proposed waterway to connect the Tennessee and Tombigbee rivers. The amendment was proposed by Representative Rankin, Democrat of Mississippi.

T. A. A. Organizes Allegheny Forum

The Transportation Association of America's Allegheny Advisory Forum, to be composed of some 75 representatives of agriculture, industry and small business, was formally organized at Pittsburgh, Pa., on April 5, at a meeting arranged by the association with the cooperation of Dr. J. Steele Gow, executive director of the Falk Foundation, and Dr. James H. Greene, executive vice-president of the Pittsburgh Chamber of Commerce.

The forum, one of many similar groups being established by the T. A. A. throughout the country, will cover Pennsylvania west of Altoona, Ohio east of Canton, and all of West Virginia. It will operate under the general direction of Anthony G. Allison, association vice-president at Pittsburgh, with E. J. Halberg, of Kittanning, Pa., president of the Pittsburgh & Shawmut, as general chairman. Regional vice-chairman are, for western Pennsylvania, Capt. C. W. McKee, New Wilmington, Pa., president, Economic and Business Foundation; for eastern Ohio, L. P. Reese, Scio, Ohio, president, Scio-Ohio Pottery Company, and, for West Virginia, Charles E. Hodges, Charleston, W. Va., managing director, Charleston Chamber of Commerce.

In addressing the Pittsburgh meeting, Donald D. Conn, executive vice-president of the Association, said in part "Since the close of the war, economic dislocations in transportation have been submerged by inflation and transitory high tonnage. But in 1949 the whole economy is on a 'catch as catch can' basis. As supply reaches or exceeds demand the full impact of trends and conditions within transportation will react with demoralizing effect upon production and distribution.

"We are faced with the same distortions and discriminations in transportation as brought about the passage of the first Interstate Commerce Act. We are right back where we started from in 1887, but with five forms of common carriers—each on a different cost base—and hundreds of contract carriers providing transportation on different terms and at different rates for the same commodity . . . The public is paying in rates and taxes for vast excesses . . . Since 1940 federal regulation has failed to serve its purpose. Present conditions in this industry threaten the whole economic and credit structure of the country."

The purpose of the Allegheny and other T. A. A. regional forums, Mr. Conn explained, is "to test the opinions of all business in reaching sound conclusions for the design of new national transportation policies and a modern system of federal regulation. Thus, the problems and transportation requirements of each area can be . . . matched into a pattern of federal law which is in the best interest of the country as a whole" and which will permit development of "each form of carrier" "to the utmost in its sphere of greatest economic usefulness." The forums will consider, in the light of conditions prevailing in their own areas, tentative conclusions reached by national panels of investors, users and operators of all forms of transportation. The joint conclusions of the panels and the forums will eventually be embodied in proposals for new transportation legislation scheduled for presentation to Congress in 1950.

Postpone North Western Strike

A strike of conductors on the Chicago & North Western, originally scheduled for April 17, has been postponed as a result of intervention by the National Mediation Board. The plan for the walkout, voted by the Order of Railway Conductors, was revealed on March 31. The dispute involves grievances which are ordinarily handled by the National Railroad Adjustment Board.

Railroad Chiefs Hit Government's Proposed Purchase of Freight Cars

The Chicago Tribune last week queried two railroad presidents—Ralph Budd of the Chicago, Burlington & Quincy and Fred G. Gurley of the Atchison, Topeka & Santa Fe—as to what they thought of the proposal of Col. J. Monroe Johnson, director of the Office of Defense Transportation, that the government acquire 550,000 new freight cars as a part of its armament program (see *Railway Age* of April 2, page 49). The newspaper quoted Mr. Budd as follows: "If government, which is so concerned about the capacity of the railroads for meeting a military emergency, will stop so heavily subsidizing the railroads' competitors in peacetime, the railroads will have more peacetime traffic and will provide an ample number of cars."

New rail is as important to the well being of the railroads as new freight cars, said Mr. Budd. If the roads are to be put in shape so they will not need large quantities of steel in a period of emergency, some attention should be given to increasing the tonnage of steel rail laid in peacetime, he asserted.

He further stated: "It might also be well for the government to prohibit wrecking of the highways by heavy trucks moving at high speeds. Such action would remove an extravagant form of subsidy that is injuring not only the railroads but the whole national transportation system."

The Tribune quoted Mr. Gurley as

stating that the proposed program is "without economic or commercial justification. There is nothing in information available to railroad officers which suggests that any international condition warrants such an extraordinary program. If the government has knowledge of an international situation which prompts it to think it should indulge in stock-piling, then the stock-piling should be in basic metals." The Santa Fe president added, however, that there should be no stock-piling, even in basic metals, until "the steelmaking ability of the country exceeds the demand of the economy."

Third Foreign Transport Institute Planned by American University

The American University of Washington, D. C., will conduct its Third Annual Foreign Transportation Institute from May 3 to 20 under the direction of Dr. L. M. Homberger, professor of transportation at the university. Cooperating on arrangements for the institute are the Association of American Railroads, Air Transport Association of America, National Federation of American Shipping, and the United States Maritime Commission.

Among those scheduled to deliver lectures are A. E. Baylis, assistant general freight traffic manager, New York Central, and L. J. Kiernan. manager of special services, Public Relations Department, A.A.R. The tuition for the three-weeks course will be $90, and applications for admission should be directed to Dr. Homberger, the American University, 1901 F street, N. W., Washington 6, D. C. The last registration day will be April 27.

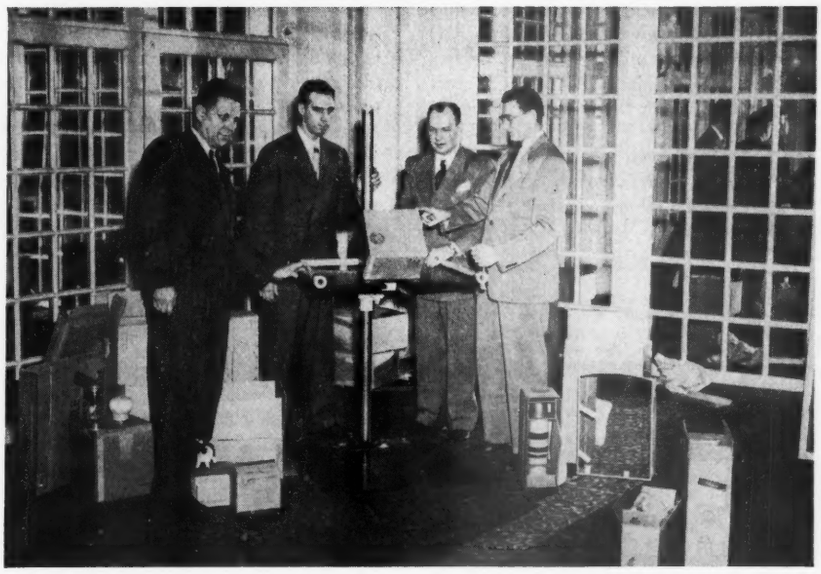
$2.2 Billion Spent for Supplies In 1948 by Class I Roads

Class I railroads in 1948 spent more for fuel and materials and supplies of all kinds used in connection with their operations than in any year on record, according to the Association of American Railroads. Such expenditures in that year amounted to $2,183,331,000—"the first time in history that they have exceeded the $2,000.000,000 mark."

Compared with 1947, the amount spent in 1948 was an increase of $274.122,000 or 14.4 per cent. The amount also was an increase of nearly $573,000,000, or 35.6 per cent, above such expenditures made in 1944, the war year when freight and passenger traffic was at an all time peak. This increase over previous years, the A.A.R. statement said, "is largelv attributable to the fact that prices of fuel, forest products, iron and steel, and the thousands of other items required by the railroads were higher than they have ever been."

For fuel alone, railroads expended $833,040,000 in 1948 compared with $691,-630,000 in the preceding year. They also spent $166,488,000 for forest products, compared with $171,592,000 in 1947. Expenditures for iron and steel products of all kinds in 1948 totaled $746,612,000 compared with $628,155,000 in 1947.

For miscellaneous products, including cement, lubricating oils and grease, ballast, electrical materials, stationery and printing, commissary supplies for dining cars, camps and restaurants, and many other items, expenditures of Class I railroads in 1948 totaled $437,191,000 compared with $417,832,000 in 1947.



Featuring a loss and damage prevention forum at Chicago on March 23 was a group of packaging engineers, who drop-tested packages to demonstrate the results of faulty packaging and handling. They were (left to right): M. F. Weber, American Stove Company, Harvey, Ill.; J. P. Corcoran, Aldens, Inc., Chicago; D. E. Black, chief sales engineer, Acme Steel Company (manufacturer of the drop-tester) Chicago; and R. E. Farney, Spiegel, Inc., Chicago

Bills in Congress

The Senate has passed and sent to the House a bill proposing various amendments to the Interstate Commerce Act which have been recommended by the Interstate Commerce Commission. The bill, S.256, was sponsored by Senator Reed, Republican of Kansas, and the favorable report on it by the Senate committee on interstate and foreign commerce said the proposed amendments were "non-controversial."

Among them is one which would extend to carrier associations, such as the Association of American Railroads, American Short Line Railroad Association, American Trucking Associations, and the Freight Forwarders Institute, the commission's authority to require reports and inspect records. Others would (1) give the commission authority to prescribe rules for extension of credit by express companies; (2) eliminate the requirement that a public hearing be held in all merger and acquisition cases where rail carriers are involved; (3) apply the act's consolidation and issuance-of-securities provisions to sleeping-car companies; (4) modify provisions relating to the filing and suspension of tariffs to ease the commission's work in those respects; (5) except from the consolidation provisions street or interurban railways not controlled by a carrier which is part of the "general steam railroad system"; and (6) provide a remedy by forfeiture for failure of motor carriers, brokers, etc., to comply with commission orders and regulations under Part II of the act.

The Senate has also passed S.255, another bill sponsored by Senator Reed. As explained in the committee report, this bill is designed to clarify the jurisdiction of joint boards in motor-carrier cases. It provides that where some members of such boards are not present, those who are present may proceed with a hearing and make recommendations to the commission. The commission has "no objection to the bill," the report also said.

Meanwhile, on the House side, the committee on interstate and foreign commerce has held hearings on pending bills proposing limitations on the time within which actions may be brought for recovery of undercharges and overcharges by or against motor carriers, water carriers, and freight forwarders. The bills are H.R.1709, sponsored by Chairman Crosser of the committee, which proposes a two-year limitation; and H.R.3162, sponsored by Representative Lynch, Democrat of New York, which proposes a three-year limitation. Among those appearing at the hearings were J. Carter Fort, vice-president and general counsel of the A.A.R.; John V. Lawrence, managing director, A.T.A.;

and Giles Morrow, executive secretary of the Forwarders Institute. They favored the Crosser bill.

Transport bills introduced in Congress since the previous listing in the *Railway Age* of February 19, page 52, includes the following:

INTRODUCED IN HOUSE OF REPRESENTATIVES

H.R.2879, to provide a system of transcontinental super-highways (Staggers of West Virginia).

H.R.2898, to amend the Railroad Retirement Act to provide for a 20 per cent increase in survivor annuities and insurance lump sums (Van Zandt of Pennsylvania).

H.R.2907 to clarify and formulate a consistent and coordinated national policy with respect to transportation costs in interstate commerce . . . and to promote competition by permitting sellers to have access to distant markets (Philbin of Massachusetts).

H.R.2908, to provide for the separation of subsidy from air-mail pay (Kennedy of Massachusetts).

H.R.2909, to authorize the Postmaster General to make special arrangements for the transportation in air commerce at low rates of large shipments of air mail where such arrangements will result in savings to the public or the postal service (Kennedy of Massachusetts).

H.R.2916, to provide for the review of certain orders of the Interstate Commerce Commission and the United States Maritime Commission and giving United States courts of appeals jurisdiction on review to enjoin, set aside, or suspend such orders (Hobbs of Alabama).

H.R.3392, to regulate the sale of reserved accommodations on passenger trains (Lemke of North Dakota).

H.R.3452, to amend the Railroad Retirement Act with respect to the computation of annuities (Kunkel of Pennsylvania).

H.R.3453, to amend the Railroad Retirement Act with respect to the definition of employment relation (Kunkel of Pennsylvania).

H.R.3824, to supplement the federal-aid road act by providing for the construction of the national system of interstate highways (Young of Ohio).

H. Res. 175, to direct the house committee on interstate and foreign commerce to investigate the financial structure of the New York, New Haven & Hartford (McGrath of New York).

INTRODUCED IN SENATE

S.1061, to prohibit the Reconstruction Finance Corporation from making loans to business enterprises for the purpose of relocating industries (Green of Rhode Island).

S.1095, to establish a Federal Traffic Bureau (Johnson of Colorado).

S.1299, to provide a system of transcontinental superhighways (Kilgore of West Virginia).

S.1318, to increase annuities under the Railroad Retirement Act by 20 per cent (Langer of North Dakota).

S.1379, to amend the Railroad Retirement Act to permit retirement with full annuity at age 60 after 30 years of service (Johnson of Colorado).

S.1431, to amend the Civil Aeronautics Act to provide a more equitable method of paying for the transportation of mail and for subsidizing essential aircraft operation (Johnson of Colorado).

I.C.C. Accepts Rehearing Plea in Eastern L.C.L. Case

The Interstate Commerce Commission has accepted a petition filed by eastern railroads for further hearing in the case wherein the commission's report of October 11, 1948, rejected the plan of those roads for increasing their rates on l.c.l. and any-quantity traffic. The proceeding is docketed as No. 29770, and the commission's adverse report was reviewed in the *Railway Age* of October 23, 1948, page 53.

The petition for further hearing was accepted by a commission order dated April 4. The order stipulated that replies to the petition might be filed on or before May 6. In the petition, the eastern roads advised the commission that if further hearing is granted they plan to submit rate-increase proposals different from those that were disapproved. The new proposals would include a "modified proposal" and an "alternative proposal."

As summarized in the petition, the former would embody a new scale of l.c.l. class rates primarily based on first class, new minimum charges. The latter would be the first class rate per 100 lb. on traffic rated first class or lower, and the applicable rate on higher rated traffic. The minimum rate per 100 lb. when either or both pick-up or delivery service were performed would be $1.00; and each piece or package of l.c.l. would be charged for at a minimum weight of 25 lb. And "in no case" would the charge on a single shipment be less than $2.25.

The "alternative proposal" would apply the Official-territory rates presently applicable to classification-rated traffic to exception-rated l.c.l. as well. Also it would provide for the new minimum charges listed above.

Freight Car Loadings

Loadings of revenue freight in the week ended April 2 totaled 725,623 cars, the Association of American Railroads announced on April 7. This was an increase of 129,294 cars, or 21.7 per cent, over the preceding week, an increase of 64,992 cars, or 9.8 per cent, over the corresponding week last year, and an increase of 10,464 cars, or 1.5 per cent, over the equivalent 1947 week.

Loadings of revenue freight for the week ended March 26 totaled 596,329 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

Revenue Freight Car Loadings
For the week ended Saturday, March 26

District	1949	1948	1947
Eastern	115,441	136,782	160,581
Allegheny	123,450	141,565	175,569
Pocahontas	19,353	22,997	66,572
Southern	106,154	118,460	139,931
Northwestern	77,836	76,345	90,055
Central Western	100,205	104,806	129,226
Southwestern	53,890	62,708	67,458
Total Western Districts	231,931	243,859	286,739
Total All Roads	596,329	663,663	829,392
Commodities:			
Grain and grain products	43,226	37,150	51,256
Livestock	8,270	8,750	14,101
Coal	37,169	46,171	174,990
Coke	12,586	11,419	14,362
Forest products	34,926	45,981	50,503
Ore	17,692	14,308	13,222
Merchandise l.c.l.	95,290	114,491	125,134
Miscellaneous	347,170	385,393	385,824
March 26	596,329	663,663	829,392
March 19	607,767	699,593	844,041
March 12	709,326	796,486	841,147
March 5	705,552	791,984	805,775
February 26	688,128	790,910	849,991
Cumulative total 12 weeks	8,229,641	9,164,981	9,830,305

In Canada.—Carloadings for the week ended March 26 totaled 73,172 cars, compared with 72,991 cars for the previous week, and 68,813 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
March 26, 1949	73,172	31,278
March 27, 1948	68,813	39,906
Cumulative totals for Canada:		
March 26, 1949	870,111	381,784
March 27, 1948	875,476	437,968

GRANT STAUFFER, CHICAGO GREAT WESTERN PRESIDENT, DIES

Grant Stauffer, president of the Chicago Great Western for the past five months and a prominent coal executive, died at New York on March 31, following an illness of several months. Prior to his election as head of the C. G. W. (reported in a feature article in the *Railway Age* of November 13, 1948, page 53), Mr. Stauffer served as a director and chairman of the the executive committee of the Kansas City Southern. He was also at the time of his death,

Grant Stauffer

president of the Sinclair Coal Company. Born on December 1, 1888, at Hope, Kan., Mr. Stauffer received his high school education in that city and later attended college at Emporia, Kan. Beginning in 1912, he served successively as coal salesman, coal jobber and operator, and in the producing and marketing of coal. He was a director of several companies and of the National Coal Association, of which he was an executive board member. He was also past-president of the Kansas City Chamber of Commerce.

Forecast Puts Loadings 3 Per Cent Below 1948's 2nd Quarter

Freight carloadings in the second quarter of 1949 are expected to be 3 per cent below those in the same period in 1948, according to estimates prepared by the 13 Shippers Advisory Boards.

On the basis of those estimates, freight carloadings of the 32 principal commodities will be 8,175,240 cars in the second quarter of 1949, compared with 8,426,389 actual carloadings for the same commodities in the corresponding period of 1948. Six of the 13 boards estimate an increase; the remainder estimate reductions.

The tabulation shows actual carloadings for each district in the second quarter of 1948, the estimated carloadings for the second quarter of 1949, and the percentage of increase or decrease.

Shippers Advisory Boards	Actual Loadings Second Quarter 1948	Estimated Loadings Second Quarter 1949	Per Cent Increase
New England....	143,735	128,141	10.9 dec.
Atlantic States	918,319	866,926	5.6 dec.
Allegheny	1,121,841	1,133,242	1.0
Ohio Valley....	1,048,682	932,700	11.1 dec.
Southeast	1,026,854	978,693	4.7 dec.
Great Lakes	637,813	662,518	3.9
Central Western	244,692	267,862	9.5
Mid-West	964,320	948,267	1.7 dec.
Northwest	717,450	721,366	0.5
Trans-Missouri-Kansas	409,065	395,717	3.3 dec.
Southwest	613,175	533,255	13.0 dec.
Pacific Coast	371,362	383,895	3.4
Pacific Northwest	209,081	222,658	6.5
TOTAL	8,426,389	8,175,240	3.0 dec.

The 13 boards expect an increase in the second quarter of 1949 compared with the same period one year ago, in the loading of 9 commodities, and a decrease in 23. Among those showing the greatest increases are: Grain, 13 per cent; cottonseed, soybean-vegetable cake and meal, excluding oil, 9.1 per cent; vehicle parts, 8.4 per cent; sugar, syrup and molasses, 3.9 per cent; ore and concentrates, 3.2 per cent; iron and steel, 1.5 per cent, and agricultural implements and vehicles other than automobiles, 1.2 per cent.

Commodities for which decreases are estimated include: Poultry and dairy products, 19.6 per cent; citrus fruits, 18.3 per cent; hay, straw and alfalfa, 17.5 per cent; fresh vegetables, other than potatoes, 9 per cent; potatoes, 7 per cent; cotton, 7 per cent; machinery and boilers, 6.7 per cent; coal and coke, 6.3 per cent; livestock, 6.2 per cent; paper, paperboard and prepared roofing, 4.9 per cent, and lumber and forest products, 4.8 per cent.

Lets Pennsylvania Increase Jersey Commutation Fares

The Interstate Commerce Commission authorized the Pennsylvania to make effective on April 1 increases in its commutation fares between New York and several points in New Jersey. The increases are in line with those, averaging about 16 per cent over-all, which the commission recently approved for application over Central of New Jersey lines in the same area (see *Railway Age* of March 19, page 97).

The P.R.R. tariffs, originally published with a March 27 effective date, were first suspended by a commission order of March 25. That order also instituted an investigation of the proposal, docketing the proceeding as I. & S. No. 5637. The lifting of the suspension, effective as of April 1, came in a March 29 order which also stipulated that the investigation of the new rates would be continued.

Postpones Argument on Post Office Request for Express Data

The Interstate Commerce Commission has postponed, from April 26 until May 6, the oral argument which it will hear at Washington, D. C., on the Post Office Department's request for information that would enable the department to exercise what it asserts to be its legal right and duty to fix rates for rail transportation of non-first-class mail at parity with express privilege payments received by the railroads from the Railway Express Agency. The proceeding, docketed as No. 30177, is an offshoot of the case (No. 9200) wherein the railroads are seeking increases in their rates for handling mail (see *Railway Age* of March 5, 1949, page 64).

ORGANIZATIONS

Robert M. Hitshew, freight traffic manager of the Atchison, Topeka & Santa Fe at Chicago, has been elected president of the **Traffic Club of Chicago.** Other officers newly elected are: First vice-president, L. R. Cowles, traffic manager, Standard Oil Company of Indiana; second vice-president, Arthur B. Murphy, assistant general freight agent, Chicago, Rock Island & Pacific; and third vice-president, Clayton F. Devine, traffic director, Silica Sand Traffic Association of Illinois. Re-elected as secretary and treasurer, respectively, are Otis A. Green, western freight traffic manager of the United States Lines, and R. J. Wallace, traffic manager, Jacques Manufacturing Company.

E. R. Oliver, vice-president, traffic of the Southern, will address the **Delta Nu Alpha** transportation fraternity at the University of Tennessee, at its annual banquet on April 15.

The **New York Railroad Club** will hold its next meeting on Thursday, April 21, instead of April 20, as announced in the *Railway Age* of April 2.

The fourth annual spring meeting of the **Instrument Society of America** will be held on May 12 and 13, in the Royal York Hotel, Toronto, Ont.

The spring meeting of the **Society for Experimental Stress Analysis** will be held at the Hotel Statler, Detroit, Mich., on May 19, 20 and 21.

The **Southern & Southwestern Railway Club** will hold its next meeting on May 19, at the Ansley Hotel, Atlanta, Ga., at 10:00 a.m. F. C. Hasse, vice-president, the Oxweld Railroad Service Company. Chicago, will speak on "Unionmelt and Heliarc Welding."

The 42nd annual meeting of the **Passenger, Ticket & Freight Agents' Association of Texas** will be held at Seybold Guest Ranch, Mineral Wells, Tex., on May 6, 7 and 8. The Texas Passenger Committee will hold a conference on May 6 and election of officers will be included in the program for May 7. At the annual banquet, also on May 7, Lloyd Kiernan, manager of special services of the public relations department, Association of American Railroads, will deliver an address on the railroads' place in public affairs.

The Connecticut Valley Chapter of the **National Railway Historical Society, Inc.,** will sponsor a railroad excursion on May 8, from New Haven, Conn., to Palmer, Mass., to be operated by the New York, New Haven & Hartford, in cooperation with the Central Vermont out of New London. Tickets must be obtained from the chairman of the trip committee, Edward G. Kelly, 411 Shelton avenue, New Haven.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4, Ill. Annual meeting, September 19-22, 1949, Hotel Sherman, Chicago, Ill.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, American Brake Shoe Company, 6th floor, 109 N. Wabash Ave., Chicago 2, Ill. Exhibit in conjunction with the meeting of the Coordinated Railroad Mechanical Associations, September 19-22, 1949, Hotel Sherman, Chicago, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC AGENTS.—C. A. Melin, 11115 Lake Ave., Cleveland 2, O.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C.R.R. of N. J. 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, June 14-16, 1949, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 12-14, 1949, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—L. P. East, Pennsylvania Railroad, Richmond, Ind. Annual meeting, April 20-23, 1949. Chamberlin Hotel, Old Point Comfort, Va.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 14-16, 1950, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Hugh L. Fitts, Missouri Pacific Magazine, 1400 M. P. Bldg., St. Louis 3, Mo. Spring meeting, May 27, 1949, Terrace Plaza Hotel, Cincinnati, O. Annual meeting, November 2-4, 1949, Gunter Hotel, San Antonio, Tex.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, Tower Bldg., Washington 5, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Annual meeting, June 27-July 1, 1949, Chalfonte-Haddon Hall Hotel, Atlantic City, N. J.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y.

Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C. Annual meeting, April 26-28, 1949, Jefferson Hotel St. Louis, Mo.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—J. H. Aydelott, Vice-President, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—A. H. Grothmann, 30

Vesey St., New York 7, N. Y. Annual meeting, September 27-29, 1949, Wentworth By-the-Sea Hotel, Portsmouth, N. H.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 18-20, 1949, Ambassador Hotel, Atlantic City, N. J.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, May 25-27, 1949, Congress Hotel, Chicago, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y. Annual meeting, June 6, 1949, Chalfonte-Haddon Hall Hotel, Atlantic City, N. J.

Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y. Annual meeting, May 2-4, 1949, Edgewater Gulf Hotel, Edgewater Park, Miss.

Safety Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y. Annual meeting, May 23-25, 1949, St. Paul Hotel, St. Paul, Minn.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 14-16, 1950, Chicago, Ill.

(*Continued on page* 88)

CAR SERVICE

O.D.T. and I.C.C. Drop Loading And Port-Traffic Restrictions

The Office of Defense Transportation announced this week that its General Order ODT 18A, the minimum-loading order for carload freight, will remain suspended and that it has also suspended, effective April 16, two other orders—General Order ODT 1, the minimum loading order for l.c.l., and General Order ODT 16C, which maintains controls on carload shipments moving to ports for export. Meanwhile, the Interstate Commerce Commission has vacated its Service Order No. 68, which prohibited the furnishing of two small cars for a larger car ordered and suspended Rule 24 of the Consolidated Freight Classification and other tariff provisions that permit the application of minimum weights lower than those of cars used.

The I.C.C. service order and General Order ODT 18A have been suspended since February 14. They would have been reinstated April 16 but for the O.D.T.'s further-suspension order and the I.C.C.'s vacating order. Both of these will become effective April 16.

As to the further suspension of Order 18A and its decision to suspend the other two orders, O.D.T. said in its announcement that the suspensions will remain in effect until June 30, when the orders will be revoked as O.D.T. is scheduled to be discontinued on that date. The announcement also said that O.D.T. Director J. Monroe Johnson had found it possible to set aside the orders because of the "continued decline in carloadings."

"In recent weeks," it added, "no substantial freight car shortages have existed and present indications are that this situation will continue for the next few months. There is reason to believe that there may be a tight situation with respect to high-class box cars as the movement of grain increases. The freight car supply situation will be watched closely between now and June 30 and, if necessary, controls under [the orders] will be reimposed."

SUPPLY TRADE

Lima-Hamilton Sales $60,920,350 in 1948

Net sales of the Lima-Hamilton Corporation and its subsidiaries were $60,920,350 in 1948, the first complete fiscal year of the company formed in 1947 when the former Lima Locomotive Works acquired all assets of the General Machinery Corporation of Hamilton, Ohio. Net profit was $4,236,026. "During the year," the anuual report said, "36 heavy duty steam locomotives were delivered to various railroads, and 31 large steamers are currently on order for domestic lines. There is substantial inquiry for steam locomotives and we believe that there is definitely a place for steam equipment. We will continue to build these locomotives and therefore our facilities in this regard are being well maintained."

Fairbanks, Morse 1948 Net at Record High

Net sales of Fairbanks, Morse & Co. and its subsidiaries last year totaled $98,705,859, compared with $89,564,599 in 1947. Consolidated net profit the largest in the company's history, was $5,752,112, compared with $4,224,777. "The company's sales of Diesel locomotives continue to be limited entirely by its production capacity," the annual report said. "A program is in progress at the Beloit, Wis., works which is expected to place the company in a better position to take advantage of the opportunities in this field."

Baldwin Locomotive Works' 1948 Sales $126,434,845

Sales of the Baldwin Locomotive Works and its wholly owned subsidiaries in 1948 amounted to $126,434,845, compared with $94,884,746 in the preceding year, according to the recently released annual report. Net profit was $3,167,741, compared with $2,651,331. "About 70 per cent of net sales were of locomotives and locomotive parts, steam and Diesel, and about 75 per cent of all locomotive sales were of the Diesel type," the report said. Sales of Diesel-electric locomotives during the year amounted to $59,178,228, more than double the 1947 figure.

Total unfilled orders for the consolidated company at the year-end were $109,268,072, compared with $118,528,012 on January 1, 1948. During the year orders were received for 291 steam locomotives and 385 Diesel-electric locomotive units. Shipments were made of 150 steam locomotives and 417 Diesel-electric locomotive units. (Diesel-electric figures exclude orders and shipments by the Whitcomb Locomotive Company).

New Freight Cars an Urgent Necessity, Says Snyder

A large number of new freight cars is an urgent necessity, particularly for reasons of national defense, John I. Snyder, Jr., chairman and president of the Pressed Steel Car Company, said in the firm's recently released annual report. "In addition . . . we also believe that it would be more economical for the country's railroads to de-emphasize their car rebuilding and major repairs, and take advantage of larger and more efficient new cars built by the car-building industry," Mr. Snyder added. The net loss of Pressed Steel Car and its subsidiaries in 1948 aggregated $2,270,841, compared with a net profit of $1,207,629 in the preceding year.

H. L. Kent, whose appointment as assistant to the president of the **Standard Railway Equipment Manufacturing Company** at New York was announced in *Railway Age* of April 2, was born in Scranton, Pa., on March 20, 1903. Mr. Kent attended the public schools there and received his higher education at Lafayette College, Easton, Pa. He joined the Ingersoll-Rand Company on February 1, 1925, as service engineer in the Scranton branch office, and later handled the company's industrial sales in the St. Louis, Mo., and Philadelphia, Pa., territories, successively. He was appointed central manager of the railroad department, at Cleveland, Ohio, on May 1, 1940, and manager of the railroad department, with headquarters at New York, in January, 1942. Mr. Kent resigned from the latter position to join the Standard Railway Equipment Manufacturing Company on April 1.

H. L. Kent

Clifford J. Baxter, formerly Chicago district manager of the **Gisholt Machine Company,** has been appointed general

sales manager at the firm's home office in Madison, Wis. He is succeeded by **Howard V. Myers,** who has been engaged in service and sales work in the Chicago office for 15 years. Assisting Mr. Myers will be **Ervin A. Huza,** who was, until recently, located at Gisholt's Philadelphia (Pa.) office.

Frank A. Weiss has been appointed assistant to general manager of the Hyatt bearings division, **General Motors Corporation,** Harrison, N. J., and **Leo V. Farrell,** formerly assistant purchasing agent, has been promoted to general purchasing agent to succeed Mr. Weiss.

James F. McCartney has been appointed eastern district sales manager of the **Duff-Norton Manufacturing Company,** with headquarters at New York, to succeed **G. L. Mayer,** who has retired but

James F. McCartney

will continue with the company in an advisory capacity. Mr. McCartney was formerly associated with the Pressed Steel Car Company and, for the past seven years, was eastern representative with offices in New York.

The **Wilson Engineering Corporation,** Chicago, has purchased the manufacturing and assembly plant facilities of **J. T. McGrath & Son,** Bloomington, Ill. **Robert W. Garvey** has been appointed vice-president and mechanical engineer and will direct operations of the newly acquired plant, with headquarters remaining in Chicago.

Leo H. Corning, assistant manager of the structural and railways bureau of the **Portland Cement Association** since 1935, has been promoted to manager of the bureau at Chicago, succeeding the late **Arthur J. Boase,** whose death was reported in the *Railway Age* of February 26.

James M. Darbaker, manager of operations for the Chicago district of the **Carnegie-Illinois Steel Corporation** (subsidiary of the **United States Steel Corporation**), has been appointed general manager of sales, and has been succeeded by **Stephen M. Jenks,** general superintendent of the Gary (Ind.) works. **John H. Vohr,** assistant general superintendent of the South Chicago plant, has been promoted to replace Mr. Jenks, and has been succeeded by **Edwin H. Gott,** assistant general superintendent of the Gary plant.

James M. Darbaker

Mr. Darbaker, a graduate of the University of Michigan, began his career at the Vandergrift (Pa.) plant, where he worked during summer vacations while attending high school. After serving for 12 years at Vandergrift, Wellsville, Ohio, and New Castle, Pa., he became master mechanic of the Gary sheet mill in 1932. The next year he was appointed assistant to plant manager, and in 1934 was promoted to manager of the combined sheet and tin mill. Mr. Darbaker became assistant manager of operations for the Chicago district in 1943, and was advanced to district manager of operations in 1947, which post he held at the time of his recent appointment.

Stephen M. Jenks

Mr. Jenks, who is a native of Port Huron, Mich., graduated from Cornell University. He began his career in the steel industry as a blast furnace blower, and in 1925 he joined U. S. Steel. He was appointed fuel engineer at the Gary sheet and tin mill in 1929, and was advanced to power engineer at Pittsburgh, Pa., in 1933. In 1935 he became assistant chief engineer, and the following year he was appointed chief engineer of the construction division. He returned to Gary in 1937 as chief engineer, and later the same year became assistant general superintendent. Mr. Jenks was advanced to general superintendent in 1940, the position he held at the time of his recent promotion.

Pure Carbonic, Inc., a subsidiary of the **Air Reduction Company,** has opened a new carbon dioxide and "Dry-Ice" manufacturing plant at 1856 South Lumber street, Chicago.

T. J. Manning, formerly vice-president of the Howell Electric Motors Company of Michigan, has been appointed assistant to the president of the **Evans Products Company,** Plymouth, Mich.

The **Hyster Company,** Portland, Ore., has announced the appointment of the **Machinery & Supplies Company,** Kansas City, Mo., as distributor of Hyster lift trucks, straddle trucks, and mobile cranes. Under the direction of **George W. Gagel,** president and general sales manager, the firm will handle Hyster sales and service in Kansas, 60 counties of western Missouri and 31 counties of northern Oklahoma.

Peter A. Becker, general superintendent of the **International Harvester Company's Tractor Works** at Chicago, has been appointed general superintendent of the Melrose Park (Ill.) Works, succeeding **Brooks McCormick,** who has been transferred to Kansas City, Mo., as assistant district manager of the general line and industrial district office.

Carl J. Chappell, field engineer of the **Portland Cement Association** in charge of activities in Missouri, has been promoted to district engineer, with headquarters at St. Louis, Mo., succeeding **Harry E. Frech,** who has retired after 30 years with the association.

The **E. A. Lundy Company,** New York, is being operated by **B. S. Williams,** vice-president, since the death of **E. A. Lundy,** president, reported elsewhere in this issue. Mr. Williams has been associated with the company since 1935.

OBITUARY

Arthur Purnell, district sales manager of the Youngstown Sheet & Tube Co. at Chicago, died at his home in Evanston, Ill., on March 31.

E. A. Lundy, president of the E. A. Lundy Company, New York, died on April 1. He was 55 years old. Before he organized the Lundy Company in 1924,

Mr. Lundy was associated with the Atlantic Coast Line from 1912 to 1916; the Long Island from 1916 to 1918; the Union Switch & Signal Co. from 1918 to 1920; and was business manager of

E. A. Lundy

Railway Electrical Engineer and Railway Signaling, publications of the Simmons-Boardman Publishing Corporation, from 1920 to 1924.

EQUIPMENT AND SUPPLIES

11,882 Freight Cars Delivered in March

Freight-train cars for domestic use delivered during March totaled 11,882, including 2,942 delivered by railroad shops, compared with February deliveries of 10,315 cars, which included 2,894 delivered by railroad shops, the American Railway Car Institute announced this week. March deliveries included 2,510 box cars, 6,744 hopper cars, 1,163 gondola cars, 896 refrigerator cars, 552 tank cars and 17 cars of other types.

Freight-train cars ordered last month for domestic use numbered 469, including 200 ordered from railroad shops, compared with February orders for 332 cars, all of which were ordered from contract car builders, the institute said. Freight-train cars for domestic use on order and undelivered on April 1 amounted to 73,188, including 29,362 on order from railroad shops, compared with 85,974 cars on order March 1 and 126,028 cars on order April 1, 1948.

SIGNALING

The **International-Great Northern** (Missouri Pacific Lines) has ordered materials from the General Railway Signal Company for expansion and rehabilitation of signaling facilities at Austin, Tex., in connection with rearrangement of tracks and construction of a new passenger station. Materials ordered include Type G color-light signals, Model 7 switch circuit controllers, Model 5D dual-control electric switch machines, welded steel relay housings, transformers and copper-oxide rectifiers.

The **Wabash** has placed an order with the Union Switch & Signal Co. for materials to install centralized traffic control on the single-track line between Tilton, Ill., and Tolono, 34 mi. The order involves a 2½-ft. Style C control machine with office and field code equipment. Other material includes Style H-5 high and dwarf searchlight signals, Style M-22A electric switch machines, Style T-21 hand operated switch stands, Style SL-25 electric locks and necessary relays and rectifiers. Field installation work will be handled by railroad forces.

CONSTRUCTION

Alton & Southern.—This road is contemplating a line change involving a mile of track which is to be rebuilt on a new alinement and at a higher elevation along the Mississippi river near East St. Louis, Ill. The work will cost between $35,000 and $40,000 and is to be undertaken to accommodate a change by the War Department in the principal levee.

Atchison, Topeka & Santa Fe.—This road has awarded contracts to J. A. Lundgren & Son, Topeka, Kan., for construction of a 100-ft. by 100-ft. brick and concrete coach tin and welding shop in that city, and to the Collins Construction Company, Kansas City, Mo., for the erection of a freight transfer dock and repair facilities at the hump yard in Argentine, Kan.

Chesapeake & Ohio.—This road has awarded a contract to B. F. Parrott & Co., Roanoke, Va., for four retarder control towers to be installed at Russell, Ky., at a probable cost of $41,725. The Gustav-Hirsch Organization, Inc., Columbus, Ohio, was awarded a contract for a 12,000-volt power line, substations and floodlights for the car retarder yard at Russell. The probable cost of the project is $128,000. Bids will be requested for construction of sanitary facilities to connect with a sewage disposal area at Newport News, Va., at a probable cost of $192,275.

Western Pacific.—Company forces of this road have begun installation of centralized traffic control between Portola, Cal., and Gerlach, Nev., and extension of seven sidings in that territory to 125-car capacity each, at a cost of $2,294,000. This project is a continuation of the W. P.'s program to install C.T.C. on its entire main line between San Francisco, Cal., and Salt Lake City, Utah. Material is being furnished by the Union Switch & Signal Co. Work is scheduled to begin shortly on the following projects, estimated costs of which are shown in parentheses: Replace 30 track-miles of 85-lb. rail with new 115-lb. rail in main-line track between Marysville, Cal., and Oroville, the rail to be furnished by the Colorado Fuel & Iron Co. ($879,222); install "Zephyr" passenger train washer at Portola ($21,512); ballast 23 mi. of main-line track between Sacramento, Cal., and Arboga ($347,521); and ballast 19 mi. of main-line track between Burmester, Utah, and Salt Lake City ($261,045).

ABANDONMENTS

Applications have been filed with the Interstate Commerce Commission by:

Chicago & Eastern Illinois.—To abandon its Freeland Park branch from Milford Junction, Ill., to Freeland Park, Ind., 10.6 mi. The application stated there is no passenger service on the line, and that very little freight traffic is available or in prospect.

Montana Western.—To abandon its entire line from Valier, Mont., to Conrad, 17.5 mi. The applicant stated that its continued maintenance and operation are uneconomical and not warranted by present or prospective traffic. It added that it has been able to operate only because of loans advanced by the Great Northern, the owner of all of its bonds; and that it is now indebted to the G.N. for $165,000 together with interest thereon at 6 per cent per annum from January 1, 1912. The M.W. offered to turn over its property to the G.N. but that road was not interested.

FINANCIAL

I.C.C. Approves Plans to Make A. & D. an Independent Road

Arrangements whereby the Atlantic & Danville, lessor of the Southern since 1899, would revert to independent operation have been approved by Division 4 of the Interstate Commerce Commission. The arrangements will involve the Southern's abandonment of operation of the A.&D., and modification by the latter of its financial structure under provisions of the so-called Mahaffie Act (section 20b of the Interstate Commerce Act).

The division's report dealt with both matters which were docketed, respectively, as Finance Docket No. 16000 and Finance Docket No. 16171. It found that public convenience and necessity permit the abandonment by the Southern, and approved, with amendments, the Atlantic's proposed securities-modification plan

News Department continued on next left-hand page

there is a place

WE FIRMLY BELIEVE that for a long, long time, there will continue to be a demand for steam locomotives.

Therefore, while we *are* building diesel-electrics for the switching field — and while we have nearly completed experimental work on the free-piston gas generator for locomotive use — we will continue to build a complete line of steam locomotives.

We will continue to explore all possible ways of improving such locomotives. We will continue to build them with the traditional fineness of design and manufacture that is responsible for Lima's world-wide reputation. And we will continue to believe that there is a place for these locomotives — for such modern power as the 2-8-4's we are now building, as our fifth order for the Nickel Plate.

LIMA HAMILTON CORPORATION

DIVISIONS: *Lima, Ohio*—Lima Locomotive Works Division; Lima Shovel and Crane Division. *Hamilton, Ohio*—Hooven, Owens, Rentschler Co.; Niles Tool Works Co. *Middletown, Ohio* — The United Welding Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.

for submission to interested security holders. Because of the interrelation of the transactions, the division withheld issuance of a certificate authorizing the abandonment until the securities plan has been accepted and the commission has issued a final order authorizing the Atlantic to make it effective.

The Southern has operated the Atlantic's line since September 1, 1899, under a lease which will expire next July 1. Not desiring to renew the lease because it has a more workable alternate route over its own lines, the Southern seeks to be relieved of all obligations under the Interstate Commerce Act to operate the Atlantic's line after July 1.

During the period of Southern operation, some of the Atlantic's facilities have deteriorated, and its equipment was not replaced as it was retired. Suits were instituted with a view to determining the liability of the Southern for its failure to maintain the Atlantic's properties, and a compromise settlement was reached. The principal provision of that settlement is that under which the Southern conditionally agreed to pay the Atlantic $3,000,000 in lieu of restoring the line and its equipment. The Southern also offered, as part of the settlement, traffic and operating arrangements such as the establishment of through routes and joint rates with divisions of rates conventionally accorded other independent short lines in the territory, reciprocal switching, joint use of some facilities, and arrangements for repair of Atlantic rolling stock in Southern shops.

The Atlantic owns 203.2 miles of line in two segments—one extending 140.5 miles from West Norfolk, Va., to Jeffress and the other extending 62.7 miles from Clarksville Junction, Va., through a portion of North Carolina to Danville, Va. The only connection between the two segments is a 1.87-mile line between Jeffress and Clarksville Junction, which is owned by the Richmond & Mecklenburg, a lessor of the Southern. Among the stipulations in the compromise settlement is one providing that the Southern will permit the Atlantic to use this connecting line at a rental tentatively computed at $11,000 a year.

Under the terms of the court's approval of the compromise settlement, $215,000 of the $3,000,000 to be paid by the Southern would be used to pay fees for services of counsel and others. One of the amendments which the commission required in approving the securities-modification plan will cut this allowance for fees to $115,000. The effect will be to increase by $100,000, from $325,850 to $425,850 that portion of the $3,000,000 which would become the Atlantic's working capital.

Other portions of the $3,000,000 would be used to effect the proposed modifications of securities. Thus $1,570,000 would be used to reduce the amount of first-mortgage bonds outstanding from $3,925,000 to $2,355,000. This would be accomplished by paying $400 on each $1,000 bond. Likewise $381,250 would be used to reduce the amount of second-mortgage bonds from $1,525,000 to $1,143,750, the cash payment there to be $250 per $1,000 bond.

The interest rate on the bonds left outstanding would be reduced from 4 to 3 per cent and their maturity extended to July 1, 1999. The new fixed charges would be $104,962.50 as compared with present charges of $218,000. Meanwhile, however, the plan also provides for surrender by the stockholders of 9.375 shares of their stock, for distribution to the bondholders on the basis of 2 shares for each $1,000 first-mortgage bond and 1 share for each $1,000 second-mortgage bond.

The plan proposed for the non-payment of interest on the bonds for the first six months of independent operation; but here the commission required another amendment, in the form of a substitute, which would make the bond interest contingent for the first 5 years but cumulative to the extent of 9 per cent, the contingent interest being payable after installments on Diesel-electric locomotives which the Atlantic plans to acquire.

Other allocations of funds from the Southern's $3,000,000 payment include $281,000 for the down payment on the Diesels and $112,400 for the first of 5 yearly payments; $82,500 for capital expenditures; and $22,000 for reorganization expenses. The plan also contemplates that $108,676, representing mainly salvage from abandoned branch lines, now held by the first-mortgage trustee, will be released to the Atlantic for corporate purposes. This would make the working capital $334,526.

Other features of the plan provide for a depreciation and obsolescence fund account; the future issue of $1,570,000 of additional first-mortgage bonds for capital purposes; a contingent 1 per cent sinking fund for each class of bonds; and the redemption of both classes of bonds at 100 per cent of their principal amount and accrued interest. Also, the plan contemplates modification of the Atlantic's charter to change the stock from $100-par to no-par, and to allow for cumulative voting. Incidental to the proposed modifications, but subject to their being consummated, unsecured claims of $365,195.92, representing advances made to the company by stockholders, with interest compounded thereon, would be released and discharged.

Chesapeake & Ohio.—*Sells Erie Common Stock.*—This road has sold its entire holdings of Erie common stock—46,700 shares—to an undisclosed purchaser for $13 a share. The C. & O. retained 259 shares of Erie 5 per cent preferred stock and $27,750 of Erie general mortgage income 4½ per cent bonds.

Huntingdon & Broad Top Mountain.—Reorganization.—This road has filed in the United States District Court at Scranton, Pa., a petition for reorganization under section 77 of the federal Bankruptcy Act. A copy of the petition was also filed with the Interstate Commerce Commission. It sets out debts totaling $5,180,450, which consist of matured bonds and notes and unpaid interest thereon. The road, the petition continued, "is insolvent," being without funds to pay these obligations and without means of borrowing or otherwise procuring such funds.

New Securities

Applications have been filed with the Interstate Commerce Commission by:

Chicago, Rock Island & Pacific.—To assume liability for $3,528,000 of series D equipment trust certificates to finance in part 10 4,500-hp. Diesel-electric freight locomotives, each consisting of two "A" units and one "B" unit. These locomotives are to be built by the Electro-Motive Division of General Motors at a unit cost of $470,528. The certificates would be dated May 15 and mature in 24 semi-annual installments of $147,000 each, beginning November 15, 1949. They would be sold on the basis of competitive bids and the interest rate would be fixed by such bids.

High Point, Thomasville & Denton.—To issue an unsecured negotiable, promissory note in the amount of $35,000 and bearing interest at 3 per cent. The note, to be delivered to the Wachovia Bank & Trust Co., of High Point, N. C., would be substituted for a $30,000 note, dated February 3, which was issued without prior approval of the commission. Proceeds of the note will be used to pay for cross-ties, for the final payment on a $35,000 note authorized on October 23, 1947, and for a Christmas bonus to employees.

Division 4 of the I. C. C. has **authorized**:

St. Louis-San Francisco.—To assume liability for $4,260,000 of series D equipment trust certificates to finance in part 13 Diesel-electric locomotives, 700 hopper cars and 130 tank cars at a total estimated cost of $5,680,647 (see *Railway Age* of March 12, page 108). The certificates will be dated March 15 and will mature in 15 annual installments of $284,000 each, beginning March 15, 1950. The commission's report approved a selling price of 99.8166 with a 2½ per cent interest rate—the bid of Harris, Hall & Co., and associates, which will make the average annual interest cost approximately 2.54 per cent. The certificates were reoffered to the public at prices yielding from 1.45 to 2.7 per cent, according to maturity.

Southern Pacific.—To assume liability for $15,900,000 of series AA equipment trust certificates to finance in part the acquisition of 55 Diesel-electric locomotives and 1,450 freight cars at a total estimated cost of $23,867,058 (see *Railway Age* of March 5, page 69). The certificates will be dated April 1 and will mature in 15 annual installments of $1,060,000 each, beginning April 1, 1950. The commission's report approved a selling price of 99.611 with a 2⅜ per cent interest rate—the bid of Harriman Ripley & Co., and Lehman Brothers, which will make the average annual interest cost approximately 2.45 per cent.
The certificates were reoffered to the public at prices yielding from 1.4 to 2.625 per cent, according to maturity.

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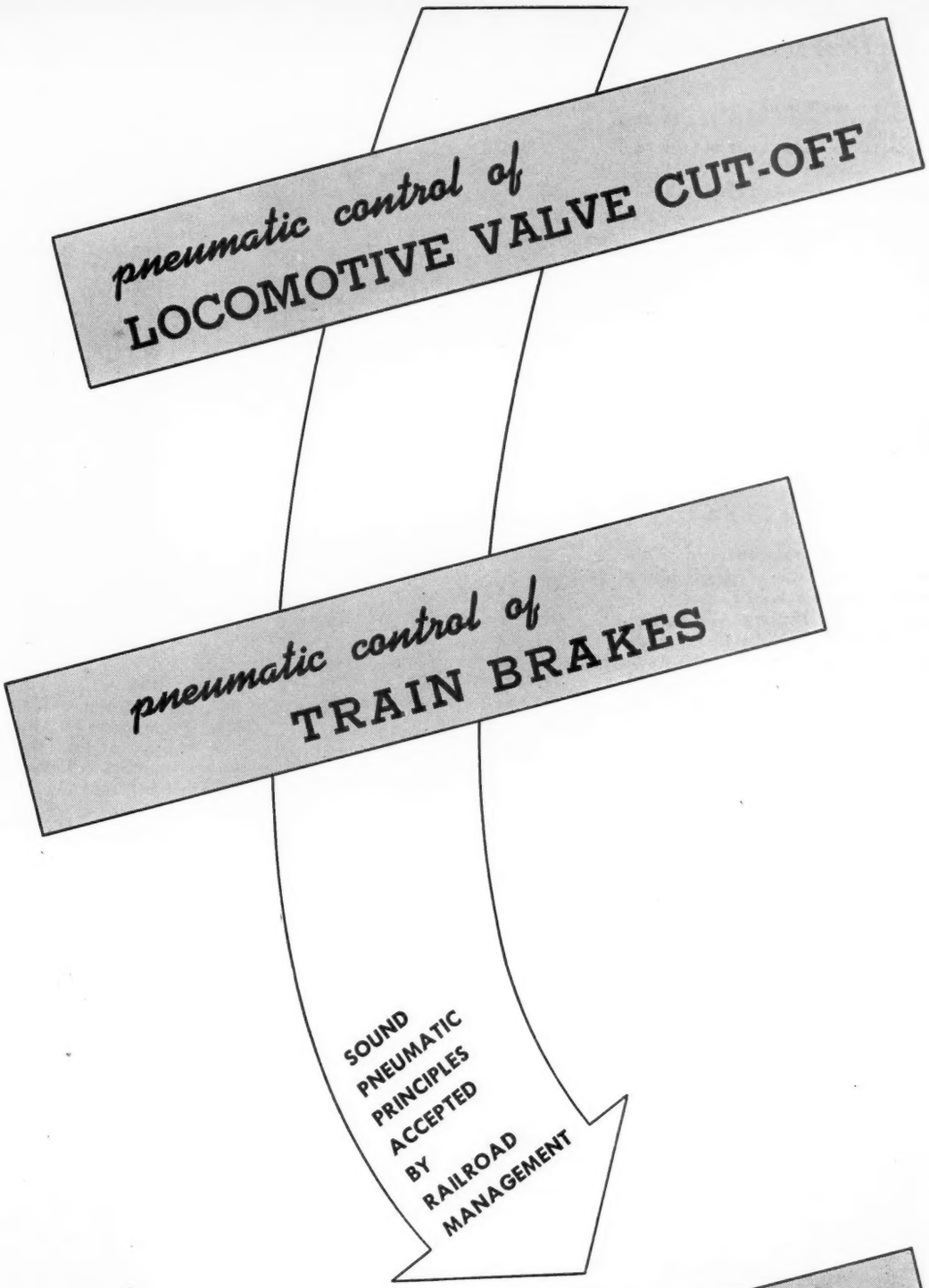

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Average Prices Stocks and Bonds

	Apr. 5	Last week	Last year
Average price of 20 representative railway stocks.....	39.89	40.09	50.66
Average price of 20 representative railway bonds.....	87.09	87.04	87.39

Dividends Declared

Atchison Topeka & Santa Fe.—$1.50 quarterly, payable June 1 to holders of record May 11.

Minneapolis & St. Louis.—25¢, payable May 2 to holders of record April 18.

St. Louis Southwestern.—$5.00, payable April 12 to holders of record April 5.

Wabash.—preferred, $4.50, payable April 21 to holders of record March 31.

RAILWAY OFFICERS

EXECUTIVE

J. A. Appleton, vice-president of the Central region of the Pennsylvania at Pittsburgh, Pa., has been elected to the presidency of the Monongahela, succeeding **C. M. Yohe,** vice-president of the Pittsburgh & Lake Erie. The Monongahela is owned by the Pennsylvania, the Pittsburgh & Lake Erie, and the Baltimore & Ohio. The presidency rotates annually.

J. C. Kenkel, chief clerk to the executive vice-president of the Canadian National, has been appointed assistant to vice-president, operation, with headquarters as before at Montreal, Que., succeeding **Frank Simpson,** who has been promoted to manager of railway, steamship and drydock facilities in Newfoundland. Mr. Kenkel was born, educated and

J. C. Kenkel

began his railway career at Montreal, his first position being with the Grand Trunk in June, 1917, as junior clerk in the office of the vice-president, operation. After serving in various clerical capacities he transferred, in 1922, to the office of the general superintendent of car service and, the following year, to the president's office. In 1928, Mr. Kenkel was assigned to special duties on the Central Vermont during the rehabilitation period following flood damage to that line. Returning to Montreal, Mr. Kenkel was promoted to assistant chief clerk in the president's office and in 1932, became chief clerk. In 1938 he returned to the operating department and at the time of his present appointment was chief clerk to the executive vice-president.

J. Raymond Pritchard, whose election as vice-president of the Norfolk Southern at Norfolk, Va., in addition to his duties as secretary, was announced in the *Railway Age* of March 19, was born in Berkley, Norfolk county, Va., on January 9, 1886. Mr. Pritchard entered railroad service on December 2, 1906, as stenographer in the general superintendent's office of the Norfolk & Southern (now Norfolk Southern), becoming sec-

J. Raymond Pritchard

retary to the general superintendent the following year, and secretary to the receiver in 1909. He then served successively as clerk in the office of the president, secretary to president, chief clerk in executive offices, assistant secretary of the road, and insurance and tax agent for the receivers. Mr. Pritchard was elected secretary of the road in October, 1939, which position he will continue to hold in addition to that of vice-president.

E. W. Reich, superintendent of telegraph and signals of the Reading, has been appointed assistant to president, with headquarters as before at Philadelphia, Pa., succeeding **A. X. Williams,** who has been granted a leave of absence on account of illness.

Cecil M. Self, executive assistant to the president of the Norfolk Southern at Norfolk, Va., has been appointed executive vice-president. Mr. Self was born at Oakman, Ala., on February 9, 1900, and received his LL.B. from Atlanta (Ga.) Law School in 1930. During vacations from school and while on leave of absence, he worked as laborer and mechanic, and made special studies of railroad yard and terminal operations and of reorganization problems. He originally entered railroad service in 1918 as clerk with the Southern, later becoming accountant in the maintenance of way and transportation departments. From 1921 to August, 1939, he served successively as chief clerk to roadmaster, chief clerk to chief dispatcher, chief clerk to engineer maintenance of way, chief clerk

Cecil M. Self

to superintendent, assistant trainmaster and trainmaster. Mr. Self was executive assistant of the Chicago, Indianapolis & Louisville at Chicago from August, 1939, to April, 1942, and chief operating officer of that road at Chicago from April, 1942, to May, 1946. Mr. Self's appointment as executive assistant to president of the Norfolk Southern became effective May 14, 1947.

William L. Taylor, assistant freight traffic manager of the Southern system at Washington, D. C., has been promoted to assistant to vice-president, with the same headquarters, succeeding **S. R. Goodman,** who is temporarily assigned to

William L. Taylor

the Railway Express Agency National Committee. Mr. Taylor was born at Alexandria, Va., on September 8, 1902, and received his education in Alexandria and Washington (D. C.) schools. He entered the service of the Southern

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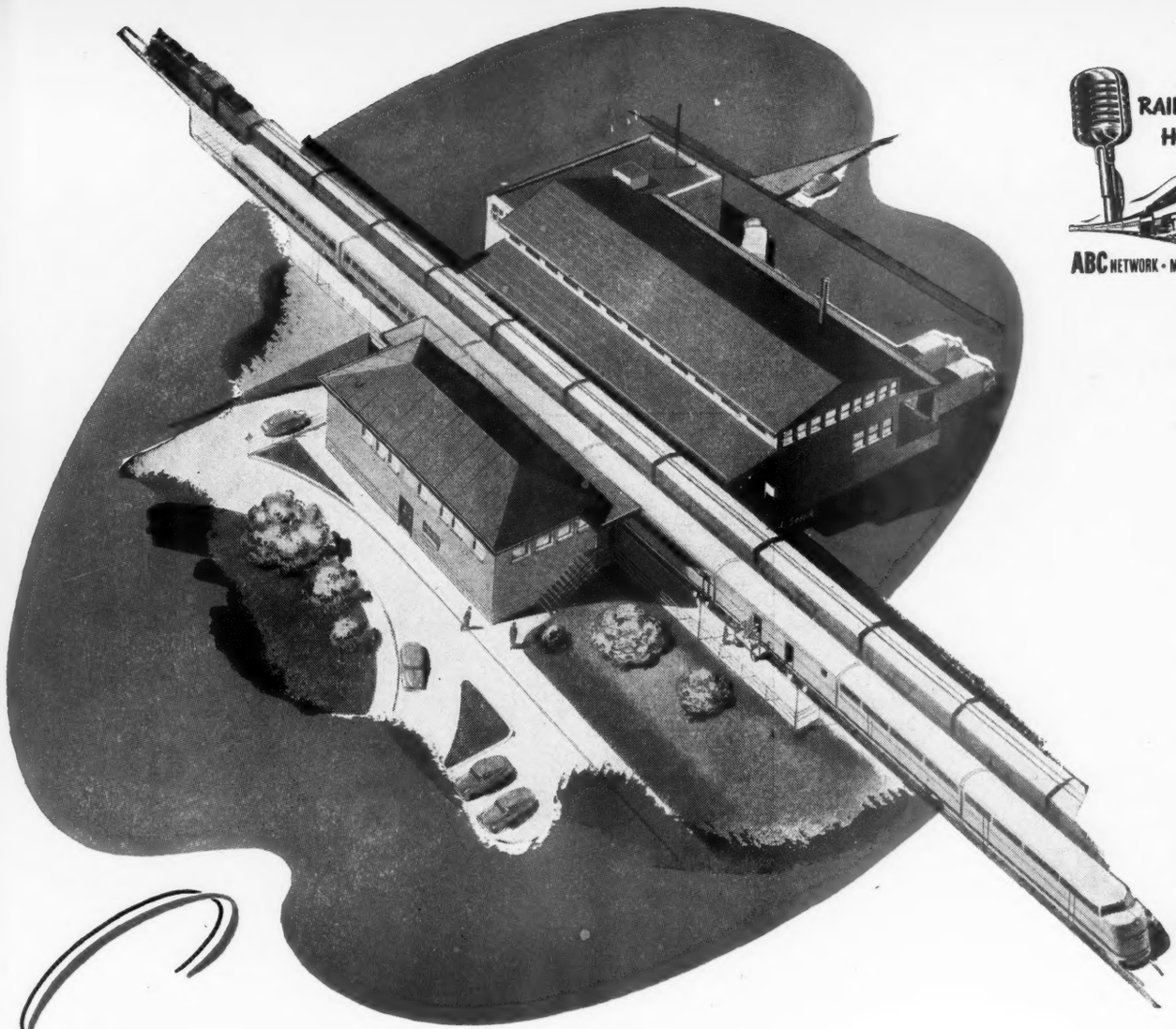


Smoother safer journeys both for passengers and freight

Whether it is handling a long, heavy-tonnage freight or a string of modern passenger cars, Westinghouse 24RL locomotive brake equipment helps assure the smooth, safe journeys that win and hold patronage.

Any desired combination of functions can be provided by merely combining standard parts. This simplifies installation and servicing, and permits easy conversion if future changes in locomotive assignment should make this desirable. Operating characteristics provided by each combination are matched exactly to the need, provide the ultimate in positive, dependable train control. The 24RL is the answer to modern requirements.

Westinghouse Air Brake Co.

WILMERDING, PA.

as a clerk at Washington in April, 1918, and, after advancing through various clerical positions in the freight traffic department, was appointed chief clerk in June, 1936. Mr. Taylor became commerce agent in December, 1938, and in October, 1941, was promoted to assistant to freight traffic manager, becoming assistant freight traffic manager on October 1, 1945.

FINANCIAL, LEGAL & ACCOUNTING

Robert A. Daley, assistant to the chief accounting officer of the Jersey Central Lines, has been appointed auditor of disbursements, with headquarters as before at Jersey City, N. J., succeeding the late **Harold P. Mead,** whose death on March 13 was reported in the *Railway Age* of March 19.

G. C. Sprague, chief accounts and statistical clerk of the Chicago, Rock Island & Pacific, has been promoted to auditor of disbursements at Chicago, succeeding **J. M. Gallagher,** who has retired.

James H. Marriott, formerly traveling auditor of the Louisville & Nashville, with headquarters at Louisville, Ky., has been appointed auditor of the New Orleans Union Passenger Terminal.

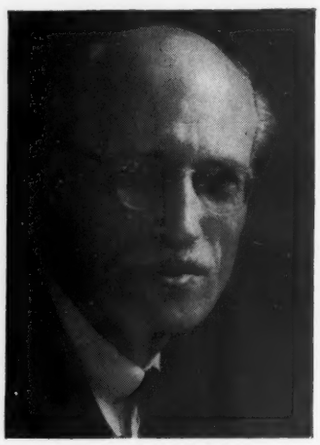
OPERATING

George W. Svoboda, whose appointment as superintendent of the Charleston district of the Atlantic Coast Line at Charleston, S. C., was reported in the *Railway Age* of March 5, was born at Chicago and was graduated from the University of Illinois in 1935 with the degree of bachelor of science in railway civil engineering. He entered railroad service the same year on the Erie at Hornell, N. Y., and later worked with the Great Northern in Montana and the Southern Pacific in California. Mr. Svoboda entered the service of the A. C. L. on July 15, 1946, as assistant engineer at Jacksonville, Fla., subsequently serving as roadmaster at Wilmington, N. C., and assistant trainmaster at Charleston. He was appointed assistant superintendent at Charleston on August 1, 1948, which position he held until his recent promotion.

R. O. Bodell, trainmaster of the Illinois Central at Jackson, Miss., has been transferred to Markham, Ill., succeeding **H. Paulsen,** who has been assigned to other duties at his own request.

Frank Simpson, assistant to the vice-president of operation of the Canadian National at Montreal, Que., has been appointed manager of the Newfoundland Railway (which became part of the C. N. R.'s Atlantic region on April 1) and also of the coastal steamships and dry docks operated by the Newfoundland. Mr. Simpson, whose headquarters will be in St. John's, Nfld., succeeds the late **H. J. Russell,** who was general manager of the Newfoundland. (See *Railway Age* of March 19, page 125.)

Mr. Simpson was born at Aberdeen, Scotland, on November 27, 1890. He entered railroad service in 1906 as a clerk with the North British Railway and was employed in station work and in the superintendent's office until 1911. From 1911 to 1920 he was clerk and secretary, engineering staff, Grand Trunk Pacific (now C. N. R.), then becoming



Frank Simpson

chief clerk in the valuation department of that road. Mr. Simpson served as secretary to the general manager of the Western region of the C. N. R. from 1921 to 1929, then becoming chief clerk to the general superintendent transportation, Western region. In 1930 he was appointed assistant chief clerk to vice-president, operation (system), of the Canadian National, being promoted to chief clerk in 1936, and to assistant to vice-president, operation, system, in 1938.

J. H. Williams, traveling car service agent of the Texas & Pacific, has been promoted to transportation assistant to operating vice-president and assistant vice-president, a newly-created post. **W. R. Swaidner** has been appointed trainmaster at Marshall, Tex.

Leonard C. Carner, terminal trainmaster of the St. Louis-San Francisco at Kansas City, Mo., has been promoted to superintendent of terminals at Springfield, Mo. **R. E. Beatty** has been appointed terminal trainmaster at Springfield, succeeding **Earl M. Gray,** who has been transferred to replace Mr. Carner.

TRAFFIC

W. B. Harahan, industrial agent of the Delaware, Lackawanna & Western at New York, has retired after 53 years of railroad service, 29 of which were with the Lackawanna.

J. M. LeMay, general agent, passenger department, Canadian Pacific, at Quebec, Que., has been promoted to the new post of assistant to the passenger traffic manager at Montreal, Que. **L. P. St.Hilaire,** traveling passenger agent at Quebec, succeeds Mr. LeMay.

G. A. Martin, traveling passenger agent of the Chicago, Rock Island & Pacific, with headquarters at San Francisco, Cal., has been appointed general agent, passenger department, at Omaha, Neb., succeeding **E. H. Williams,** who has retired.

Theodore F. Lawson, district freight agent of the Pennsylvania at Los Angeles, Cal., has been promoted to general southern freight agent at Atlanta, Ga., succeeding **R. W. Leedy,** who has been advanced to division freight agent at Columbus, Ohio. **Elmer R. Norris,** district freight agent at Cincinnati, Ohio, has succeeded Mr. Lawson.

Donald P. Felt, district freight agent of the Boston & Maine and traffic manager of the Springfield Terminal, at Springfield, Vt., has been appointed assistant general freight agent of the B. & M., at Boston, Mass.

Carl W. Dilli, assistant to freight traffic manager of the Southern, has been promoted to assistant freight traffic manager, with headquarters as before at Washington, D. C., succeeding **William L. Taylor,** who has been promoted to assistant to vice-president. **John S. Martin,** chief clerk to assistant vice-president (traffic) at Washington, has been promoted to assistant general freight agent,

Carl W. Dilli

with headquarters as before at Washington. Mr. Dilli, a native of Washington, was born on December 18, 1893, and attended Washington public schools. In December, 1909, he entered the service of the Southern as a clerk at Washington, where he was subsequently advanced to chief rate clerk, assistant chief clerk, chief clerk and commerce agent. He was promoted to assistant to freight traffic manager in October, 1941.

Leo R. Esdorn, Jr., general agent of the Illinois Central at Monroe, La., will be transferred to Houston, Tex., on May 1.

News Department continued on next left-hand page

Because they're Truly Round . . .

HSGI
Tension-Cast
Valve Snap Rings

HSGI *individually cast* Valve Snap Rings produce a more perfect seal, wear long and uniformly because they are perfectly round when compressed within the valve chamber bushing. Being slightly out of round when cast, they assume a true circular shape when the gaps are closed under tension. Another superiority is their greater hardness and finer grain structure on all four surfaces . . . the result of improved casting methods.

HSGI *Tension Cast* Valve Snap Rings do contribute to better performance and lower maintenance; important railroads have proved that. Let us tell you more. Hunt-Spiller Mfg. Corp., 383 Dorchester Ave., Boston 27, Mass. In Canada: Jos. Robb & Co., Ltd., 4050 Namur St., Montreal 16, P.Q. Export Agents: International Ry. Supply Co., 30 Church St., New York 7, N. Y.

Hunt-Spiller are exclusive railroad sales representatives for Double Seal Piston Rings made for diesel and other services. Double Seal Piston Rings are made from Hunt-Spiller *Air Furnace* Gun Iron.

HUNT-SPILLER

LIGHT WEIGHT
STEEL PISTONS AND VALVES
DUPLEX SECTIONAL PACKING
AIR FURNACE GUN IRON

to succeed **Frank H. Webber,** who will retire after almost 40 years of service. **Raymond C. Porteous** will succeed Mr. Esdorn.

L. E. Renner, supervisor of the Southern Pacific's service and reservation agency at San Francisco, Cal., has been appointed district passenger agent, with headquarters at Oakland, Cal., succeeding **H. R. Greenhouse,** who is entering private business.

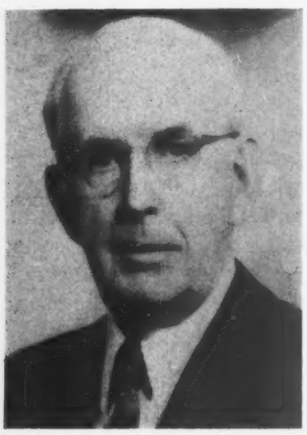
The following have been appointed general agents by the Delaware, Lackawanna & Western: **W. A. Branning,** St. Louis, Mo.; **J. D. Given,** Los Angeles, Cal.; **A. B. Collins,** San Francisco, Cal., and **A. H. Snider,** Detroit, Mich. Mr. Snider succeeds the late **O. H. Warmbold.**

MECHANICAL

Fred E. Geibel, superintendent of equipment for the Pacific Electric at Los Angeles, Cal., has retired after 27 years of service. He has been succeeded by **E. A. Stevens,** who has been assistant mechanical superintendent since 1937.

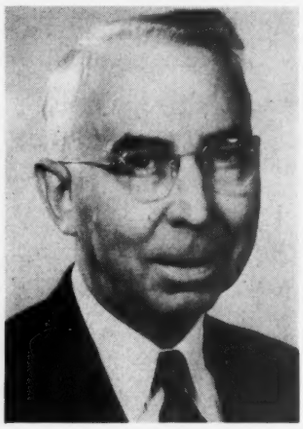
William J. O'Neill, superintendent of motive power of the Western Pacific, with headquarters at Sacramento, Cal., has retired after more than 54 years of service, and has been succeeded by **Elbert E. Gleason,** mechanical engineer at Sacramento. **Edward T. Cuyler,** assistant to the superintendent of motive power at Sacramento, has been promoted to assistant superintendent of motive power.

Mr. O'Neill began his railroad career in 1893, at the age of 16, as machinist apprentice for the Union Pacific. He later became erecting foreman for that



William J. O'Neill

road at Cheyenne, Wyo., and subsequently served with the Southern Pacific at Ogden, Utah, and as division foreman on the narrow gage at Mina, Nev. After working as machinist on several other roads, he joined the Chicago, Rock Island & Pacific in 1907 as roundhouse foreman at Herington, Kan., and later served as master mechanic successively at El Dorado, Ark., Little Rock, Chickasha, Okla., and Shawnee. In 1915 he was appointed mechanical superintendent, second district, of the Rock Island, and in 1923 he became general mechanical superintendent of the Denver & Rio Grande Western. Mr. O'Neill left the Rio



Elbert E. Gleason

Grande in June, 1936, to join the W. P. as superintendent of motive power at Sacramento.

Mr. Gleason was born on October 17, 1889, at Marysville, Cal., and after completing a course in mechanical engineering at Polytechnic College of Engineering, Oakland, Cal., in 1911, joined the W. P. at that point as roundhouse clerk. He was transferred to the Sacramento shops in 1913, where he held various positions until 1916, when he became

Edward T. Cuyler

chief draftsman. In 1923 he was appointed mechanical engineer, and in 1928 was promoted to assistant to superintendent of motive power. Mr. Gleason became master mechanic in 1939 and mechanical engineer at Sacramento in 1941.

Mr. Cuyler was educated at Iowa University, where he studied engineering. After leaving college he served as special apprentice on the Rock Island, and in 1937 became a service engineer with the Electro-Motive Division of General Motors Corporation. In 1941 he joined the W. P. as assistant to superintendent of motive power.

D. S. Neuhart, assistant general superintendent of motive power and machinery for the Union Pacific at Omaha, Neb., has been promoted to general superintendent of motive power and machinery at that point, succeeding **John Gogerty,** whose retirement was reported in the *Railway Age* of April 2. Mr. Neuhart has been succeeded by **A. R. Snyder,** mechanical superintendent of Diesel power at Salt Lake City, Utah.

ENGINEERING & SIGNALING

A. G. Hibbard, roadmaster of the Canadian Pacific at Ottawa, Ont., has been appointed division engineer, Montreal Terminals division, at Montreal, Que., succeeding **N. M. Kelly,** promoted.

W. L. Scott has been appointed superintendent of telegraph and signals of the Reading at Philadelphia, Pa., succeeding **E. W. Reich,** who has been appointed assistant to president.

SPECIAL

M. H. Bonner, chief special agent of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., has retired after 42 years of service, and has been succeeded by **R. A. Pribble.**

OBITUARY

John E. Rogan, who retired as assistant engineer maintenance of way, Illinois Central, in March, 1948, because of ill health, died in a hospital in New Orleans, La., on March 24, as the result of a heart attack.

Arthur T. Berg, superintendent of the Chicago, Milwaukee, St. Paul & Pacific at Aberdeen, S. D., died in that city on March 29. Mr. Berg entered railroad service with the Milwaukee in 1912 as a section man at Channing, Mich., and subsequently served as car accountant clerk, car distributor and trainmaster at Milwaukee, Wis. He was transferred to Chicago in 1928, and advanced to assistant superintendent of the Chicago terminals in 1933. In 1939 he was promoted to superintendent at that point, and in 1942 was transferred to Terre Haute, Ind. Mr. Berg became superintendent at Aberdeen in January, 1947.

O. H. Warmbold, general agent of the Delaware, Lackawanna & Western at Detroit, Mich., died recently.

American-Fort Pitt SPRINGS

New straight-line continuous-process heat-treating furnace in operation at the Porter spring plant.

HEAT-TREATED TO AAR SPECIFICATIONS

American-Fort Pitt springs are now heat-treated to AAR specifications in America's most modern heat-treating plant. This new furnace, the first of its kind to be installed in any spring plant, is the last word in heat-treating equipment. Completely automatic, the unit takes coil springs of any size through the complete process of heating, quenching and tempering by automatic conveyors. Heat is automatically controlled, quenching oil is constantly agitated. The result is perfect accuracy and uniformity.

You can specify American-Fort Pitt Springs with complete assurance that they will measure up to the most exacting requirements.

AMERICAN-FORT PITT SPRING DIVISION

H. K. PORTER COMPANY, INC.

PITTSBURGH 1, PA. District Offices in Principal Cities

CANADIAN PACIFIC RAILWAY COMPANY

Sixty-Eighth Annual Report of the Directors

Year Ended December 31, 1948

(Abridged)

To the Shareholders:

The high and profitable level of industrial activity which prevailed during 1948, with good crops in the West and a condition of almost full employment throughout Canada should have assured to your Company fair returns from its rail operations.

On the contrary, while gross earnings at $355 million reached a new peak, net earnings were lower than those of any year since 1905. The reason is found in uncontrollable costs on the one hand and rigidly regulated rates and revenues on the other.

The rate of return on the net investment of your Company in railway property in 1948 was 1.8%. In the same year, on a comparable basis, the average rate of return earned by Class I railroads of the United States was 4.38%.

An increase of 21% in Canadian class and commodity rates, with certain exceptions, over the level prevailing since 1922 was made effective April 8, 1948, by order of the Board of Transport Commissioners, dated March 30, 1948. The overall increase, because of the fixed statutory grain rates, amounted to only 16% on the revenues from the tonnage handled. The benefit which might have been expected from this increase was more than offset by a heavy increase in rates of pay made retroactive to March 1, 1948, (which could have been avoided only at the cost of a nation-wide strike) as well as by steadily rising costs for materials and supplies.

Because of these greatly increased operating costs, the railways applied to the Board in July last for a further increase of 20% in freight rates. Shortly thereafter, the Governor in Council, in disposing of an appeal by a number of the Provincial Governments, directed the Board to review the objections of the Provinces to the Order of the Board dated March 30, 1948, concurrently with the hearing of the new application of the railways. Hearings were opened on these two questions in January 1949 and now stand adjourned to March 28 for argument.

Reflecting these conditions, the accounts of your Company show the following results for the year ended December 31, 1948:

Income Account

Gross Earnings		$355,249,702
Working Expenses (including railway income taxes)		336,830,536
Net Earnings		$ 18,419,166
Other Income (after income taxes)		24,864,949
		$ 43,284,115
Fixed Charges		15,890,264
Net Income		$ 27,393,851
Dividends—Preference Stock:		
2% paid August 2, 1948	$2,278,841	
2% payable February 1, 1949	2,278,841	
	$ 4,557,682	
Dividends—Ordinary Stock:		
2% paid October 1, 1948	6,700,000	
		11,257,682
Balance transferred to Profit and Loss Account		$ 16,136,169

(The final dividend of 3% on the Ordinary Stock which was declared subsequent to the end of the year and is payable March 31, 1949, amounting to $10,050,000 is not deducted in the accounts for the year 1948.)

Profit And Loss Account

Profit and Loss Balance December 31, 1947		$279,123,961
Final Dividend of 3% on the Ordinary Stock, declared from the earnings of the year 1947, paid March 31, 1948	$10,050,000	
Amount transferred to Depreciation Reserves	88,568,940	
		98,618,940
		$180,505,021
Balance of Income Account for the year ended December 31, 1948	$16,136,169	
Portion of steamship insurance recoveries representing compensation for increased cost of tonnage replacement	669,922	
	$16,806,091	
Deduct: Miscellaneous—Net Debit	573,799	
		16,232,292
Profit and Loss Balance December 31, 1948, as per Balance Sheet		$196,737,313

Railway Operations

Gross earnings in 1948 increased $36,663,783, or 11.5% over those of 1947.

The increase in freight earnings amounted to $36,254,686, or 14.5%. Approximately $25.1 million were produced by the increase of 21% in Canadian domestic freight rates, effective April 8, and an increase of 15% in competitive rates, effective September 15. Increases granted United States carriers and made applicable in Canada on international, overhead and certain import and export traffic produced $11.8 million.

The volume of traffic carried, measured in ton miles, was 3.8% less than in 1947.

Lower earnings were reported for only one commodity group, grain and grain products. The decrease in the volume of grain handled on the western lines of your Company amounted to 27 million bushels, or 10.9%.

Passenger earnings decreased $2,049,575, or 5.1%, reflecting a decrease both in the number of passengers carried and in the average distance travelled.

Working expenses increased $41,136,806, or 13.9%. The general wage increase of 17c per hour, which was made effective March 1, 1948, added approximately $22.5 million to expenses, while changes provided for in agreements with employees in respect of wages, vacations and working rules, increased payrolls by $2 million. Increased material prices added approximately $14 million to the expenses for the year.

Maintenance expenses amounted to $140,887,368. of which

Highlights

	1948	1947
Gross Earnings	$355,249,702	$318,585,919
Working Expenses	336,830,536	295,693,730
Net Earnings	18,419,166	22,892,189
Ratio, Net to Gross Earnings	5.2%	7.2%
Other Income	$ 24,864,949	$ 24,788,927
Interest and Rental Charges	15,890,264	15,787,174
Preference Stock Dividends—4%	4,557,682	4,557,682
Ordinary Stock Dividends—5%	16,750,000	16,750,000
Balance for Modernization and Other Corporate Purposes	6,086,169	10,586,260
Tons of Revenue Freight Carried One Mile (thousands)	25,218,400	26,201,731
Revenue per Ton Mile of Freight	1.13c	0.95c
Revenue Passengers Carried One Mile (thousands)	1,523,514	1,665,585
Revenue per Passenger Mile	2.48c	2.40c
Total Pay Rolls	$229,969,419	$193,960,029
Employees, All Services	86,578	83,528
Average Annual Wage	$2,656	$2,322

[Advertisement]

$68,366,870 was for maintenance of way and structures and $72,520,498 for maintenance of equipment. The increase over 1947 expenses amounted to $23,825,446.

There was credited to maintenance expenses during the year an amount of $2,250,000, and a corresponding amount was withdrawn from the Maintenance Fund to which reference was made at the last Annual Meeting. Pending the outcome of studies now under way, the user rates of depreciation were raised in order to take into account increases in investment in depreciable property which have become effective since the rates were first established. This resulted in increased depreciation charges of $6,164,075.

Transportation expenses amounted to $154,068,982, an increase of $20,116,003, or 15.0%, over 1947. The following statistical averages are indicative of a continued high level of operating efficiency:

	1948	1947
Freight Train Load — gross tons	1,686	1,723
Freight Train Speed — miles per hour	16.1	15.9
Gross Ton Miles per Freight Train Hour	27,124	27,456
Freight Train Fuel Consumption — pounds per 1000 gross ton miles	119	115
Freight Car Load — tons	31.0	31.2

Railway tax accruals amounted to $8,024,445. Included in this total was an amount of $2,500,000 provided for Dominion and Provincial Income Taxes, a reduction of $9,500,000 from the 1947 figure. This reduction was due principally to the decrease in net railway earnings and to the segregation of income taxes between railway and non-railway accounts.

The net debits for hire of equipment and joint facility rents, amounting to $2,627,735, were added to working expenses in 1948, whereas in former years these items had been deducted from gross earnings.

Net earnings from railway operations were $18,419,166, a decrease of $4,473,023. The ratio of net to gross earnings was the lowest ever recorded, 5.2%, as compared with the previous low of 7.1% in 1946.

Other Income

Other income, after provision of $2,325,000 for income taxes, amounted to $24,864,949. This was $76,022 greater than the total shown for 1947, when the provision for income taxes was included in railway tax accruals.

Steamship, hotel and communications results were adversely affected by higher operating costs. Net earnings from steamships decreased $1,068,411, from hotels $723,705 and from communications $1,034,667 compared with the previous year.

Dividend income increased $5,259,054 mainly from The Consolidated Mining and Smelting Company of Canada, Limited. Increased earnings due to higher world prices for base metals enabled that company to declare dividends and bonuses amounting to $11.00 per share, compared with $8.00 in 1947.

Net Income And Dividends

Net income, after payment of fixed charges, amounted to $27,393,851, a decrease of $4,500,091 from the 1947 figure of $31,893,942. Dividends amounting to 4% were declared on the Preference Stock. A dividend of 2% (fifty cents per share) on the Ordinary Stock was paid October 1, 1948, and after the close of the year a dividend of 3% (seventy-five cents per share) on the Ordinary Stock was declared, payable March 31, 1949. As the Directors pointed out, net earnings from rail operations were insufficient for the payment of any dividend on the Ordinary Stock.

Earnings per share on the Ordinary Stock, after fixed charges and Preference Stock dividend, amounted to $1.70 compared with $2.04 in 1947.

Profit And Loss Account

The Profit and Loss balance at December 31, 1947, of $279,123,961 was reduced by the amount of the 3% dividend on Ordinary Stock, $10,050,000, which was declared after the close of 1947.

The attention of the Shareholders is drawn to the transfer of $88,568,940 from profit and loss to depreciation reserves. Prior to 1933 your Company accounted for changes in property only at the time when renewal or retirement took place. In that year, accrual of depreciation was commenced in respect of steamships, and later progressively for other classes of depreciable property. In addition to provisions for depreciation made from annual income, certain transfers of available credit balances and amounts previously appropriated from surplus have, from time to time, been made to the depreciation reserves, which at December 31, 1947, amounted to $324,478,772. On the other hand the accrued depreciation at that date as shown by the depreciation reserves computed on the basis approved and recorded by the Income Tax Department, which include depreciation accruals from 1920, amounted to $413,047,712. As the depreciation methods now being followed in the corporate and income tax records are identical, it was deemed desirable to bring the accumulated reserves also into agreement.

Land Accounts

Sales of lands and townsites amounted to $3,336,041, which included the old Hotel Vancouver site, 101,184 acres of timber lands, and 77,285 acres of farming land sold at an average price of $5.18 per acre. The remaining holdings of your Company consist of 1,684,041 acres, of which 1,029,445 are farm and pasture lands and the balance timber lands and townsites.

Your Company holds, under varying reservations, the title to petroleum rights underlying 11,378,677 acres of land in the Prairie Provinces. Though recent discoveries of oil in Alberta have proved profitable to your Company, it cannot be assumed that more than a relatively small part of this acreage will yield anything of commercial value. The policy of your Company has been to encourage development by making favourable terms to companies willing to undertake exploration and drilling. At the close of the year, 33,088 acres were under lease to various oil companies and 9,136,539 acres under reservation for exploration. Rents, royalties and reservation fees in 1948 produced $1,196,219, a substantial increase over the previous year.

Balance Sheet

Total assets at the end of the year amounted to $1,709,010,491, an increase of $60,556,668. Property investment increased by $49,449,510, details of which are shown in a supporting schedule to the balance sheet. The largest item of expenditure was $39,279,507 for rolling stock, of which $23,578,895 was for new freight cars. Expenditures on steamships totalled $5,262,628, of which $3,451,340 was for the construction of two new passenger ships for the British Columbia Coast Service. The option for sale of the old Hotel Vancouver was exercised during the year and the property was retired.

At the end of the year there was on deposit $16,698,580 of unexpended Equipment Trust funds.

There was little change in the total of either current assets or current liabilities, but material and supplies increased $12,773,244, while cash and Dominion of Canada securities decreased $12,876,373.

Finance

The amount of serial equipment obligations paid during the year was $10,264,000. This included $2,000,000 under Equipment Trust, Series "J", dated January 2, 1948, amounting to $20,000,000, referred to in the previous Annual Report.

As of November 1, 1948, The Royal Trust Company, as Trustee, entered into an agreement under which $17,000,000 principal amount of Equipment Trust Certificates was issued, guaranteed as to principal and interest by your Company. This issue, designated as Series "K" maturing in equal semi-annual instalments from May 1, 1949, to November 1, 1958, inclusive, is payable in Canadian currency, and bears interest at 2⅜% per annum. Under this arrangement, equipment constructed or to be constructed at an estimated cost of $21,250,190 in Canadian funds is leased to your Company at a rental equal to the instalments of principal of and interest on the Equipment Trust Certificates.

These transactions resulted in a net increase in funded debt during the year of $26,736,000 and a reduction of $268,000 in the amount of Consolidated Debenture Stock pledged as collateral.

[Advertisement]

Employee Relations

The request for a general wage increase made late in 1947 by representatives of practically all organized employees of your Company became the subject of investigation by two Boards of Conciliation established by the Department of Labour in the early part of the year. The majority report of each Board recommended an increase of seven cents an hour and the employees were advised by the railways that they were prepared to accept this recommendation. The employees rejected the recommendation and took a strike vote; subsequently the labour organizations ordered a strike to take effect July 15, 1948. The Dominion Government intervened in the negotiations that followed and your Company felt compelled to agree to a wage increase of seventeen cents an hour as being the only course that could avoid a general railway strike. The increase which was made effective March 1, 1948, means an addition to payroll expense for railway operations of approximately $27,000,000 per annum; the estimated cost of applying the increase to all employees of your Company is $32,300,000 per annum.

In 1948 the scope of medical services was extended by undertaking the annual physical examination of certain classes of employees as a further measure of protection to the public and to the employees themselves.

A standard induction procedure for new employees of all classes was determined upon during the year and put in force January 1, 1949. Its purpose is to establish minimum standards of qualification for new entrants to the service and is complementary to the physical examination on entry which was made a general requirement in 1945. It is intended also to assure that new employees have knowledge of, and regard for, Canadian Pacific service requirements.

Canadian Pacific Air Lines, Limited

During 1948, the operations of your Air Lines resulted in a net loss of $193,645 as compared with a loss of $584,266 in 1947. Operating revenues increased 2.9%. Operating expenses were reduced by 6.1% despite higher costs of labour and materials.

The new routes first operated in 1947 continued to show satisfactory progress. The Vancouver-Calgary service, via the Okanagan Valley, was used to particular advantage in 1948 for the special movement of goods and passengers during the flood emergency in British Columbia.

Additional new routes were assigned and operated during the year, including the services between Vancouver and Whitehorse via Sandpit and between Dawson City and Aklavik. A licence was also issued to your Air Lines for a scheduled service between Montreal and Val d'Or.

A major development during the year was the designation of your Air Lines by the Dominion Government to operate two Canadian international air services in the Pacific region, one to Australia and New Zealand and the other to the Far East via Alaska. Development and organization work has been commenced and a contract has been placed for "Canadair Four" aircraft for use on these new routes which, it is anticipated, will go into operation about the middle of 1949.

United States Subsidiaries

Net income of Minneapolis, St. Paul & Sault Ste. Marie Railroad Company, after provision for fixed and contingent charges, amounted to $1,770,421, compared with $1,183,000 in the previous year. The improvement resulted from increased revenues produced by higher freight rates. A dividend of $1.00 per share on the capital stock was declared on February 17, 1948, amounting to $719,104, of which your Company received $359,829, the same as in 1947.

Net earnings of The Duluth, South Shore and Atlantic Railway Company amounted to $713,952, an increase of $176,492 over the previous year. The plan of reorganization of the South Shore, approved by the Interstate Commerce Commission, was approved by the District Court on July 31, 1948. It was subsequently submitted to a vote of the security holders for acceptance or rejection and the Commission has recently announced the acceptance of the plan by the security holders.

Further hearings in the reorganization proceedings of the Wisconsin Central Railway Company are being held before an Examiner of the Interstate Commerce Commission.

Rates and Services

References have been made previously in this Report to the general increase in Canadian freight rates in 1948 and to the application of the railways for a further increase of 20%, now the subject of hearings before the Board of Transport Commissioners for Canada. Assuming the maintenance of the present level of traffic, it is estimated that the overall increase in freight revenues, if the application is granted, would amount to approximately $30,000,000.

Hearings were held by the Board concluding in February 1949 on an application by the Attorney-General of British Columbia for a reduction of the Mountain scale of freight rates to the Prairie scale. The railways took the position that the evidence presented, showing the substantially higher cost of operation in Mountain as compared with Prairie territory, fully justified higher rates. It was further argued that any loss of revenue through adjustment of the Mountain scale should be made up to the railways through a general increase in rates.

The increases granted United States railways by the Interstate Commerce Commission and the application of these in Canada to certain classes of traffic by authority of the Board of Transport Commissioners have been referred to previously. Effective January 5, 1948, such rates were, on the average, 37.8% above the level in effect on June 30, 1946. In proceedings under Ex Parte 166, a further interim increase averaging 3.6% was granted, effective May 6, 1948. In the final decision in that case 1% was added, effective August 21, 1948. A new application for higher rates was heard in proceedings known as Ex Parte 168, and on December 29, 1948, the Commission rendered its decision, authorizing an increase averaging 5.4%, effective January 11, 1949. With this increase in effect, rates are 52% higher than they were at June 30, 1946. This is in striking contrast with the overall yield of 16% from the increase authorized in Canadian domestic freight rates.

During the past year your Company has succeeded in having located on or adjacent to its lines, 596 manufacturing, warehousing and distributing enterprises. To serve 221 of these, twenty-two miles of siding were constructed.

Work on the centrally controlled classification terminal in the Montreal area which was begun in 1947 continued throughout the past year. Good progress was made in laying track and on construction of the necessary buildings.

In expansion of the policy of road-rail transportation your subsidiary, Canadian Pacific Transport Company, Limited, acquired two more highway trucking services operating in Saskatchewan, Alberta and British Columbia.

Steamship Replacement

The *Empress of Scotland* was released from trooping service by the British Ministry of Transport in May and is now being overhauled and reconverted for passenger service. It is anticipated that this work will be completed in the spring of 1950.

The *Empress of France* re-entered the Atlantic service in September, after being overhauled and reconditioned. She operates in the Liverpool-Montreal and Liverpool-Saint John service as a sister ship to the *Empress of Canada*.

The *Empress of Australia* is still under charter to the British Ministry of Transport and employed in trooping service.

The *Princess Marguerite* and the *Princess Patricia*, both under construction for the British Columbia Coast Service, were launched during the year. It is expected that these two vessels will be placed in service in the summer of 1949.

The Canadian Australasian Line, in which your Company owns a half interest, resumed service between Vancouver and Sydney in August by the motor vessel *Aorangi*.

Capital Appropriations

In anticipation of your confirmation, capital appropriations in addition to those approved at the last Annual

[Advertisement]

Meeting were authorized by your Directors during the year in the amount of $5,992,777. This included a net increase of $1,439,394 in appropriations for new rolling stock representing the difference between increased prices over the original estimates, covered in the case of outside builders by escalator clauses in contracts, and the cancellation of appropriations for 10 passenger cars. The other principal items were $1,070,570 for the reconversion of the *Empress of France*, $950,000 for purchase from Canadian Pacific Express Company of its office building in Montreal, various additions and betterments to communication facilities, and purchase and renovation of an uptown office building in Halifax.

Your approval will be requested also for capital appropriations of $30,365,889 for the year 1949. The principal items are as follows:

Additions and betterments to stations, freight sheds, coaling and watering facilities and enginehouses	$2,709,911
Replacement and enlargement of structures in permanent form	1,016,270
Tie plates, rail anchors and miscellaneous roadway betterments	452,953
Replacement of rail in main line and branch line tracks with heavier section	1,403,377
Additional terminal and side track accommodation	388,889
Additions and betterments to shop machinery	300,604
New rolling stock	22,913,353
Additions and betterments to rolling stock	880,250
Additions and betterments to communication facilities	236,095

The appropriations for new rolling stock make provision for 23 Diesel locomotives to be placed in service on the Montreal-Newport-Wells River line. This main line operation is well suited for the introduction of diesel power service and it is anticipated that important economies will be achieved. Provision is also made in the appropriations for 10 Diesel switchers and 2,240 freight cars.

Stock Holdings

The holdings of the Capital Stock of your Company at December 31 were as follows:

	Ordinary		Preference		Total
	No. of Holdings	Percentage of Stock	No. of Holdings	Percentage of Stock	Percentage of Stock
Canada	19,852	14.30	169	.46	10.20
United Kingdom & Other British	10,605	37.49	27,468	96.79	55.06
United States	31,494	43.41	82	.34	30.65
Other Countries	3,185	4.80	534	2.41	4.09
	65,136	100.00	28,253	100.00	100.00

Directorate

Mr. N. R. Crump, Vice-President in charge of all lines of your Company, was appointed a Director to fill the vacancy created by the death of Mr. G. W. Spinney, C.M.G.

The undermentioned Directors will retire from office at the approaching Annual Meeting. They are eligible for re-election.

Hon. F. Philippe Braise, C.B.E., K.C. Mr. G. Blair Gordon
Mr. N. R. Crump Mr. W. A. Mather

Officers And Employees

Your Directors desire to express their sincere appreciation of the efficient service rendered by officers and employees. Two out of every five of the employees of your Company have been in its service for twenty years or more. This is an important asset to your Company in its relations with the public.

For the Directors

W. A. MATHER, *President*

Montreal, March 14, 1949.

Canadian Pacific Railway Company • General Balance Sheet, December 31, 1948

ASSETS

Property Investment:		
Railway, Rolling Stock and Inland Steamships	$917,760,540	
Improvements on Leased Property	114,304,439	
Stocks and Bonds—Leased Railway Companies	134,172,370	
Ocean and Coastal Steamships	59,418,471	
Hotel, Communication and Miscellaneous Properties	98,856,977	
		$1,324,512,797
Other Investments:		
Stocks and Bonds—Controlled Companies	$ 69,915,412	
Miscellaneous Investments	46,994,057	
Advances to Controlled and Other Companies	8,857,539	
Mortgages Collectible and Advances to Settlers	1,360,672	
Deferred Payments on Lands and Townsites	9,077,867	
Unsold Lands and Other Properties	12,483,756	
Unexpended Equipment Trust Deposits	16,698,580	
Maintenance Fund	25,350,000	
Insurance Fund	13,188,540	
Steamship Replacement Fund	30,504,810	
		234,431,233
Current Assets:		
Material and Supplies	$ 49,486,147	
Agents' and Conductors' Balances	14,380,154	
Miscellaneous Accounts Receivable	20,209,438	
Dominion of Canada Securities	26,290,000	
Cash	35,145,313	
		145,511,052
Unadjusted Debits:		
Insurance Prepaid	$ 80,055	
Unamortized Discount on Bonds	3,240,099	
Other Unadjusted Debits	1,235,255	
		4,555,409
		$1,709,010,491

LIABILITIES

Capital Stock:		
Ordinary Stock	$335,000,000	
Preference Stock—4% Non-cumulative	137,256,921	
		$ 472,256,921
Perpetual 4% Consolidated Debenture Stock	$325,588,729	
Less: Pledged as collateral to bonds and equipment obligations	30,150,500	
		295,438,229
Funded Debt		102,037,000
Current Liabilities:		
Pay Rolls	$ 8,071,951	
Audited Vouchers	14,359,066	
Net Traffic Balances	4,410,125	
Miscellaneous Accounts Payable	9,511,393	
Accrued Fixed Charges	963,390	
Unmatured Dividend Declared	2,278,841	
Other Current Liabilities	8,200,598	
		47,795,364
Deferred Liabilities:		
Dominion Government Unemployment Relief	$ 1,447,223	
Miscellaneous	3,057,320	
		4,504,543
Reserves and Unadjusted Credits:		
Maintenance Reserves	$ 25,350,000	
Depreciation Reserves	439,851,108	
Investment Reserves	4,015,422	
Insurance Reserve	13,188,540	
Contingent Reserves	4,119,173	
Unadjusted Credits	6,141,811	
		492,666,054
Premium on Capital and Debenture Stock		34,458,562
Land Surplus		63,116,505
Profit and Loss Balance		196,737,313
		$1,709,010,491

ERIC A. LESLIE
Vice-President and Comptroller

TO THE SHAREHOLDERS,

CANADIAN PACIFIC RAILWAY COMPANY:

We have examined the above General Balance Sheet of the Canadian Pacific Railway Company as at December 31, 1948, the Income and Profit and Loss Accounts for the year ending on that date and other related schedules, and have compared them with the books and records of the Company.

The records of the securities owned by the Company at December 31, 1948, were verified by an examination of those securities which were in the custody of its Treasurer and by certificates received from such depositaries as were holding securities in safe custody for the Company.

In our opinion the General Balance Sheet, Income and Profit and Loss Accounts and the other related schedules are properly drawn up so as to present fairly the financial position of the Company at December 31, 1948, and the results of its operations for the year then ended, according to the best of our information and the explanations given to us and as shown by the books of the Company.

PRICE, WATERHOUSE & CO.,
Montreal, March 11, 1949. *Chartered Accountants.*

[Advertisement]

NORFOLK AND WESTERN RAILWAY COMPANY

Summary of Fifty-Third Annual Report for 1948

Total Revenue and other income for the year was a new record, due principally to increases in rates approved by Federal and State regulatory bodies. Freight revenues were the largest in any single year. The volume of freight traffic about equalled that of the preceding year. The decrease in number of passengers carried continued throughout the year, and despite higher fares passenger revenues declined. Income from hire of cars and other equipment was greater due in part to higher car rental rates in effect the entire year.

Total Expenses were also the highest in the Company's experience. Wages rose steeply, and cost of materials increased.

Balance of Income, after deducting sinking funds and miscellaneous appropriations account retirements in connection with revision of line, increased $3,399,000, or 11 per cent. After deducting dividends on Adjustment Preferred Stock, the balance transferred to earned surplus, $34,812,000, was equivalent to $6.19 per share of $25 par Common Stock.

Condensed Income Statement

	1948	Comparison with 1947	Per Cent.
REVENUES AND OTHER INCOME:			
Freight—Coal	$111,007,642	Inc. $11,073,175	11
Other	61,265,038	Inc. 8,371,853	16
Passenger	6,220,650	Dec. 426,148	6
Mail, Express and Miscellaneous	7,046,026	Inc. 658,962	10
Total Railway Operating Revenues	$185,539,356	Inc. $19,677,842	12
Rent Income—Equipment and Joint Facilities—Net	12,457,351	Inc. 1,954,941	19
Other Income—Net	2,267,900	Dec. 40,688	2
Total	$200,264,607	Inc. $21,592,095	12
EXPENSES AND OTHER INCOME CHARGES:			
Way and Structures—Repairs and Maintenance	$23,269,425	Inc. $2,460,745	12
Equipment—Repairs and Maintenance	33,934,389	Inc. 3,340,935	11
Transportation—Operations	58,147,010	Inc. 8,197,888	16
Other Expenses	9,852,728	Inc. 1,830,145	23
Total Railway Operating Expenses	$125,203,552	Inc. $15,829,713	14
Taxes—Federal $28,014,841			
State, County and Local 6,269,354	34,284,195	Inc. 2,353,154	7
Interest on Funded Debt	1,899,828	Dec. 135,908	7
Total	$161,387,575	Inc. $18,046,959	13
NET INCOME	$38,877,032	Inc. $3,545,136	10
SINKING FUNDS AND MISCELLANEOUS APPPROPRIATIONS	3,185,662	Inc. 146,374	5
BALANCE OF INCOME	$35,691,370	Inc. $3,398,762	11
DIVIDENDS ON ADJUSTMENT PREFERRED STOCK	879,608		
BALANCE TRANSFERRED TO EARNED SURPLUS	$34,811,762	Inc. $3,398,762	11

Condensed Earned Surplus—Unappropriated

CREDIT BALANCE, JANUARY 1, 1948		$215,512,033
CREDITS:		
Balance Transferred from Income	$34,811,762	
Miscellaneous Credits	548,681	
Total		35,360,443
		$250,872,476
CHARGES:		
Appropriation of Surplus for Dividends on Common Stock	$22,503,728	
Miscellaneous Charges	942,829	
Total		23,446,557
CREDIT BALANCE, DECEMBER 31, 1948		$227,425,919

Financial

Capital stock outstanding was $162,638,500, par value, which represented 78.48 per cent. of total outstanding stock and bond capitalization. Stockholders numbered 17,486 at the year end, an increase of 2,258 over the previous year.

Quarterly dividends of twenty-five cents per share were paid upon the outstanding Adjustment Preferred Stock. Quarterly dividends of seventy-five cents per share were paid upon the outstanding Common Stock, and in addition, an extra dividend of $1.00 per share was paid in December. Total dividends amounted to $23,383,000.

Total Funded Debt was $44,585,000, and represented 21.52 per cent. of total outstanding capitalization. Fixed charges were earned 21.43 times in 1948 and an average of 14.72 times for the last ten years.

At the end of the year, appropriations to the sinking fund for retirement of the Company's Funded Debt and income from investments totaled $5,366,000, and investments, largely Company bonds, had a market value of $5,508,000.

In the three postwar years, capital expenditures for improvements and modernization amounted to $54,559,000, all of which were made from the Company's Treasury. The authorized program through 1950 involves capital expenditures totaling approximately $43,600,000.

Taxes

Total taxes were $34,284,000, an increase of $2,353,000. or 7.37 per cent. Included in this amount were Federal income, retirement and unemployment insurance taxes, $27,980,000, as well as State, County and local income, property and miscellaneous taxes.

Total taxes amounted to $1,476 for each employee, $6 for each share of Common Stock and eighteen cents for each dollar of operating revenues.

A reserve fund for taxes and contingencies totaled $36,487,000 at the end of 1948. Of this fund, $35,016,000 was invested in United States Government obligations.

Transportation Rates

Because of continuing higher railroad operating costs, interim increases in freight rates in effect at the beginning of the year were twice raised with approval of the Interstate Commerce Commission and then supplanted by permanent increases effective August 21, 1948. They amounted generally to 20 to 30 per cent. in basic freight rates, and somewhat less on certain kinds of traffic, including coal and coke, on which the increases were 20 per cent. but not to exceed 40 cents per ton. Freight rate increases made in 1948 added approximately $12,790,000 to the Company's revenues. Continuation of rising costs resulted in a further petition for relief. Pending final decision, the Commission authorized interim increases of 6 per cent. in the rates or charges within and between Eastern and Southern territories and of 4 or 5 per cent. within and between other territories, effective January 11, 1949. The Commission authorized, effective July 19, 1948, increases in base passenger fares from 2.5 to 3 cents per mile in coaches and from 3.5 to 4 cents per mile in Pullman cars, averaging

[Advertisement]

about 17 per cent. Higher express rates also were authorized, but the effect upon the Company's revenues was small.

Wage Increases

Wage increases and rules changes for both operating and non-operating employees granted during 1948 will add approximately $15,742,000 annually to the Company's operating costs. Demands of the five operating brotherhoods for extension of the paid vacation period from the present seven days to a maximum of 30 days, based upon length of service with a minimum of 15 days pay, will be considered by National Committees representing the railways and the organizations.

The Harriman Safety Award

For the fourth time, the Company was awarded the Edward H. Harriman Memorial Gold Medal for its outstanding safety record among the nation's Class I railroads in 1947. The employees' safety record in 1947 also was excellent. A policy of constantly improving and modernizing equipment and other facilities and maintaining the plant at a high standard, as well as a continuous educational safety program among employees, together with close managerial supervision and excellent cooperation of employees, have contributed to this notable attainment.

Employees

The average number of employees during the year was 23,223. Total payroll for 1948 was $79,916,000, an average of $3,441 per employee, compared with $70,698,000 and $3,061, respectively, for 1947. In addition to wages and salaries, the Company paid $6,280,000 for Railroad Retirement and Unemployment Insurance taxes and employee relief and pension funds, an average of $270 per employee.

It is of interest to note that in 1948 the Company paid out:

$79,976,000 for payrolls.
$34,284,000 for taxes.
$23,384,000 in dividends to stockholders.

The Company expresses its appreciation of the continued loyalty, efficiency and cooperative effort of both employees and officers, who have contributed in full measure to the year's accomplishments.

R. H. SMITH,
President.

OPERATING REVENUES AND OPERATING EXPENSES OF CLASS I STEAM RAILWAYS

Compiled from 128 monthly reports of revenues and expenses representing 132 Class I steam railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF JANUARY 1949 AND 1948

Item	United States		Eastern District		Southern District		Western District	
	1949	1948	1949	1948	1949	1948	1949	1948
Miles of road operated at close of month	226,686	227,218	53,503	53,701	46,033	46,149	127,150	127,368
Revenues:								
Freight	$594,747,028	$613,361,412	$237,972,458	$230,157,364	$129,190,240	$135,047,436	$227,584,330	$248,156,612
Passenger	81,522,478	80,896,924	42,424,768	41,593,554	13,954,142	13,706,767	25,143,568	25,596,603
Mail	17,310,223	15,137,647	6,146.518	5,446,395	3,178,898	2,714,629	7,984,807	6,976,623
Express	4,982,572	7,883,915	1,096,942	1,406,610	1,253,760	1,808,342	2,631,870	4,668,963
All other operating revenues	32,124,046	33,454,889	14,283,271	14,786,630	5,671,491	5,813,368	12,169,284	12,854,891
Railway operating revenues	730,686,347	750,734,787	301,923,957	293,390,553	153,248,531	159,090,542	275,513,859	298,253,692
Expenses:								
Maintenance of way and structures	103,265,396	102,436,923	36,978,042	38,839,045	22,171,847	22,510,483	44,115,507	41,087,395
Depreciation	10,521,965	10,280,022	4,440,704	4,361,864	1,839,566	1,784,334	4,241,695	4,133,824
Retirements	1,001,947	488,754	56,580	113,268	26,857	50,874	918,510	324,612
Deferred maintenance	*111,118	*331,884	*2,304	*10,131	*50,037	*159,575	*58,777	*162,178
Amortization of defense projects	153,874	142,290	14,685	13,295	49,295	43,386	89,894	85,609
Equalization	5,719,340	5,298,030	2,011,283	1,985,800	1,876,091	1,824,948	1,831,966	1,487,282
All other	85,979,388	86,559,711	30,457,094	32,374,949	18,430,075	18,966,516	37,092,219	35,218,246
Maintenance of equipment	145,932,480	140 488,112	61,278,307	59,645,902	28,871,954	28,454,197	55,782,219	52,388,013
Depreciation	21,638,424	19,832,067	8,592,760	7,830,184	4,408,453	4,425,946	8,637,211	7,575,937
Retirements	*58,014	*67,981	*7,034	*106	*11,487	*54,351	*39,493	*13,524
Deferred maintenance and major repairs	*171,991	*412,272	*84,270	.....	*53,410	*96,531	*34,311	*315,741
Amortization of defense projects	1,226,654	1,226,309	450,603	452,429	243,805	236,664	532,246	535,216
Equalization	426,812	495,547	17,541	106,593	347,598	295,637	61,673	93,317
All other	122,870,595	119,414,442	52,308,707	51,256,802	23,936,995	23,644,832	46,624,893	44,512,808
Traffic	16,258,256	15,477,728	5,415,473	5,090,247	3,627,285	3,502,336	7,215,498	6,885,145
Transportation—Rail line	315,660,410	323,241,290	133,464,109	137,872,371	58,804,711	62,068,253	123,391,590	123,300,666
Miscellaneous operations	11,576,823	11,673,822	4,405,532	4,488,762	1,617,335	1,924,402	5,353,956	5,260,658
General	23,575,652	22,537,641	9,027,032	8,718,796	5,035,604	4,886,676	9,513,016	8,932,169
Railway operating expenses †	616,269,017	615,855,516	250,568,495	254,655,123	120,328,736	123,346,347	245,371,786	237,854,046
Net revenue from railway operations	114,417.330	134,879,271	51,355,462	38,735,430	32,919,795	35,744,195	30,142,073	60,399,646
Railway tax accruals	67,629,077	79,004,455	27,089,390	26,909,359	16,733,983	18,828,343	23,805,704	33,266,753
Pay-roll taxes	22,130,683	30,996,223	9,250,861	12,945,277	4,296,520	6,152,368	8,583,302	11,898,578
Federal income taxes‡	18.752,995	23,863,324	7,635,347	5,433,397	6,850,802	7,442,037	4,266,846	10,987,890
All other taxes	26,745,399	24,144,908	10,203,182	8,530,685	5,586,661	5,233,938	10,955,556	10,380,285
Railway operating income	46,788,253	55,874,816	24,266,072	11,826,071	16.185,812	16,915,852	6,336,369	27,132,893
Equipment rents—Dr. balance	10,400,822	10,975,244	4,810,237	4,957,569	*743,066	*1,053,610	6,333,651	7,071,285
Joint facility rent—Dr. balance	3.143,011	3,602,420	1,482,628	1.839,274	537,502	524,227	1,122,881	1,238,919
Net railway operating income	33,244,420	41.297,152	17,973,207	5,029,228	16,391,376	17,445,235	*1,120.163	18,822,689
Ratio of expenses to revenues(percent)	84.3	82.0	83.0	86.8	78.5	77.5	89.1	79.7

† Includes $15,151,242 accrued in anticipation of major wage awards.
‡ Includes income tax and surtax.
* Decrease, deficit, or other reverse item.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

[Advertisement]

Meetings and Conventions

(*Continued from page 70*)

Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 22, 1949, La Salle Hotel, Chicago, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y. Annual meeting, September 12-14, 1949, Edgewater Beach Hotel, Chicago, Ill.

Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 27-29, 1949, Congress Hotel, Chicago, Ill.

Electrical Section.—J. A. Andreuccetti, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 20-21, 1949, La Salle Hotel, Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Annual meeting, June 27-29, 1949, Palmer House, Chicago, Ill.

Freight Claim Division.—C. C. Beaupric, 59 E. Van Buren St., Chicago 5 Ill. Annual meeting, June 14-16, 1949, Boston, Mass.

Motor Transport Division.—Transportation Bldg., Washington 6, D. C.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President. Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, May 17-19, 1949, Chalfonte-Haddon Hall Hotel, Atlantic City, N. J.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, October 26-28, 1949, General Oglethorpe Hotel, Savannah, Ga.

Traffic Department.—Walter J. Kelly, Traffic Officer, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—Samuel E. McKay, Baltimore & Ohio R. R., Grand Central Station, Chicago 7, Ill.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Gulf, Mobile & Ohio R.R., Mobile 5, Ala. Annual meeting, May 25-27, 1949, Battery Park Hotel, Asheville, N. C.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings. fourth Tuesday of each month, except June, July and August, Hotel DeSoto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 19-22, 1949. Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—J. A. Dinges, Union Tank Car Company, 228 N. LaSalle St., Chicago 1, Ill. Regular meetings, second Monday of each month except June, July and August, LaSalle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

CHICAGO LUNCHEON CLUB OF MILITARY RAILWAY SERVICE VETERANS.—Col. R. O. Jensen, Schiller Park, Ill. Luncheon second Wednesday of each month, Chicago Traffic Club, Palmer House, Chicago, Ill.

COORDINATED RAILROAD MECHANICAL ASSOCIATIONS.—C. F. Weil, American Brake Shoe Company, 6th floor, 109 N. Wabash Ave., Chicago 2, Ill. Annual meeting, September 19-22, 1949, Hotel Sherman, Chicago, Ill.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa. Next meeting, April 21, 1949, William Byrd Hotel, Richmond, Va.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting, September 19-22, 1949, Hotel Sherman, Chicago, Ill.

MAINTENANCE OF WAY CLUB OF CHICAGO.—E. C. Patterson, 400 W. Madison St., Chicago 6, Ill. Regular meetings, fourth Monday of each month, October through April, inclusive, except December, when the third Monday, at Eitel's Restaurant, Field Bldg.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting, September 19-22, 1949, Hotel Sherman, Chicago, Ill.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in October, December, February and April. Annual meeting, April 28, 1949, Shelburne Hotel (formerly the Sheraton Hotel), New York, N. Y.

MILITARY RAILWAY SERVICE VETERANS.—S. Thomson, 1061 W. Sheridan Road, Chicago 40, Ill.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, August, 1949, Hotel Cleveland, Cleveland, O.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—Frank Cross, General Mills, Inc., Oklahoma City, Okla.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November 17-18, 1949, Palmer House, Chicago, Ill.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—R. B. Fisher, 59 E. Van Buren St., Chicago 5, Ill.

NATIONAL SAFETY COUNCIL, RAILROAD SECTION.—J. R. Thexton, Delaware, Lackawanna & &Western R.R. Co., Hoboken, N. J. Annual meeting, October 25-27, 1949, probably at the Hotel Morrison, Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August and September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION.—E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave. W., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

NORTHWEST LOCOMOTIVE ASSOCIATION.—R. M. Wigfield, Northern Pacific Ry., Room 1134, G. O. Bldg., St. Paul 1, Minn. Regular meetings, third Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB.—S. E. Byler, 121 E. Sixth St., Los Angeles 14, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Cal., and Hotel Biltmore, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 445-447 N. La Salle St., Chicago 10, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill. Annual meeting, September 19-22, 1949, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 60 E. 42nd St., New York 17, N. Y.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section of A.A.R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis 3, Mo. Annual meeting, September 12-14, 1949, Peabody Hotel, Memphis, Tenn.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 12-14, 1949, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A.A.R. Signal Section.

SOUTHEASTERN DIESEL RAILWAY CLUB.—John Sims, P.O. Box 155, Buena Vista Station, Miami 37, Fla. Regular meetings, second Tuesday in February, April, June, August, October, and December, 9:30 a.m., Mayflower Hotel, Jacksonville, Fla.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E. Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—E. E. Humble, High Point, Thomasville & Denton R.R., High Point, N. C. Next meeting, July 27-28, 1949, Hotel McAllister, Miami, Fla.

TORONTO RAILWAY CLUB.—D. L. Chambers, P. O. Box 8, Terminal "A", Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q and C Company, 59 E. Van Buren St., Chicago 5, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y. Annual meeting, October 8-9, 1949, Hotel Roanoke, Roanoke, Va.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

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